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### BUREAU OF MINES

MUSEUM BUILDING

14th Avenue and Sherman Street **DENVER 2, COLORADO** 

# **ANNUAL REPORT**

for the Year

1956



WALTER E. SCOTT, JR.

Commissioner of Mines

Publication Approved by James A. Noonan, State Controller





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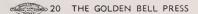
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#### LETTER OF TRANSMITTAL

May 1st, 1957

Honorable Steve McNichols Governor of Colorado State Capitol Building Denver 2, Colorado

Dear Governor McNichols:

In compliance with the requirements of the law, Chapter 92, Article 32, Section 11 of the Colorado Revised Statutes 1953, I have the honor to transmit herewith the Report of the State Bureau of Mines for the year 1956.

Respectfully submitted,

Walter E. Scott, Jr. Commissioner of Mines

# PERSONNEL OF THE COLORADO BUREAU OF MINES 1956

WALTER E. SCOTT, JR., Commissioner of Mines	Central City
G. A. (BUD) FRANZ, JR., Deputy Commissioner.	Denver
NORMAN R. BLAKE, Inspector, District No. 1	Black Hawk
FRED E. THEOBALD, Inspector, District No. 2	Canon City
JOHN W. DOYLE, Inspector, District No. 3	Leadville
ELZIE D. RAY, Inspector, District No. 4	Montrose
JOSEPH L. KEATING, Deputy Inspector	Leadville
JOHN H. PAKKA, Deputy Inspector	Telluride
RICHARD C. GROOM, Associate Curator	Denver
MARGARET G. LAWRENCE, Office Secretary	Denver
THELMA L. MacMANUS, Accidents & Statistics	Denver
NAOMI S. JONES, Information & Records	Denver

#### DISTRICTS OF INSPECTION

#### COLORADO BUREAU OF MINES

DISTRICT NO. 1, all of the following counties: Adams, Arapahoe, Boulder, Cheyenne, Clear Creek, Denver, Gilpin, Jefferson, Kit Carson, Larimer, Logan, Morgan, Phillips, Sedgwick, Washington, Weld, and Yuma.

DISTRICT NO. 2, all of the following counties: Baca, Bent, Crowley, Custer, Douglas, Elbert, El Paso, Fremont, Huerfano, Kiowa, Las Animas, Lincoln, Otero, Park, Prowers, Pueblo, and Teller.

DISTRICT NO. 3, all of the following counties: Alamosa, Chaffee, Conejos, Costilla, Eagle, Garfield, Grand, Jackson, Lake, Mineral, Moffat, Pitkin, Rio Blanco, Rio Grande, Routt, Summit, and that part of Gunnison County in the extreme northwest corner and lying north of the 39th degree of latitude, and that part of Saguache County lying south and east of the Continental Divide.

DISTRICT NO. 4, all of the following counties: Archuleta, Delta, Dolores, Hinsdale, La Plata, Mesa, Montezuma, Montrose, Ouray, San Juan, San Miguel and Gunnison County, except the extreme northwest corner lying north of the 39th degree of latitude and that part of Saguache County lying north and west of the Continental Divide.

#### COMMISSIONERS OF MINES

HARRY A. LEE	May 11, 1895—May 10, 1903
E. L. WHITE	May 10, 1903—May 10, 1907
T. J. DALZELL	May 10, 1907—May 10, 1911
T. R. HENAHEN	May 10, 1911—May 10, 1915
FRED CARROLL	May 10, 1915—May 10, 1919
HORACE F. LUNT	June 1, 1919—June 1, 1923
JOHN T. JOYCE	June 1, 1923—June 12, 1939
EDWARD P. ARTHUR	June 12, 1939—August 26, 1943
FRED JONES	September 27, 1943—April 25, 1950
WALTER E. SCOTT, JR	May 3, 1950

#### PUBLICATIONS OF THE BUREAU OF MINES BULLETINS

Bulletin No. 1, Recommendations for Safety Appliance in Mining, Harry A. Lee, Commissioner of Mines, 1896.

Bulletin No. 2, Precious Metal Production for the Year 1898,

Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 3, Mining Laws, Relative to Bureau of Mines Precious Metal Production, Harry A. Lee, Commissioner of Mines, 1899.

Bulletin No. 4, Precious Metal Production, Harry A. Lee, Com-

missioner of Mines, 1901.

Bulletin No. 5, Precious Metal Production, Harry A. Lee, Com-

missioner of Mines, 1902.

Bulletin No. 6, Regulations Relative to the Construction, Equipment and Operation of Metalliferous Mines, Mills and Metallurgical Plants, Recommendations and Mineral Production for 1905, E. L. White, Commissioner of Mines,

Bulletin No. 7, Federal and State Laws Relating to Mining,

Fred Carroll, Commissioner of Mines, 1916.

Supplement to Bulletin No. 7, Mining Laws Enacted by the Twenty-first General Assembly, Fred Carroll, Commissioner of Mines, 1917.

Supplement No. 2 to Bulletin No. 7, Amendments to the Mining Laws Enacted by the Twenty-second General Assem-

bly, Horace F. Lunt, Commissioner of Mines, 1919.

Supplement No. 3 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-third General Assembly, Horace F. Lunt, Commissioner of Mines, 1921.

Supplement No. 4 to Bulletin No. 7, Amendments to Laws Relating to Mining Enacted by the Twenty-fourth General Assembly, Horace F. Lunt, Commissioner of Mines, 1923.

Bulletin No. 8, The Oil Shales of Northwestern Colorado, Horace F. Lunt, Commissioner of Mines, 1919.

Bulletin No. 9, Mine Safety Standards, Horace F. Lunt, Commissioner of Mines, 1920. Out of print, now embraced in Bulletin No. 11.

Bulletin No. 11, Federal and State Laws Relating to Mining, John T. Joyce, Commissioner of Mines, 1931.

Bulletin No. 12, Mining Laws of Colorado, Edward P. Arthur, Commissioner of Mines, 1942.

Bulletin No. 13, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1946.

Bulletin No. 14, Mining Laws of Colorado, Fred Jones, Commissioner of Mines, 1949.

Bulletin No. 15, Oil Well Safety Laws, Walter E. Scott, Jr., Commissioner of Mines, 1953.

Circular No. 1, Location of Lode and Placer Mining Claims, Walter E. Scott, Jr., Commissioner of Mines, 1953.

Bulletin No. 16, Colorado Mining Laws with Rules and Regulations, Walter E. Scott, Jr., Commissioner of Mines, 1954.

#### REPORTS

- Report of Bureau of Mines, Colorado, from its establishment in May, 1895, to November 30, 1896, Harry A. Lee, Commissioner of Mines, 1896.
- Report for the Year 1897, Harry A. Lee, Commissioner of Mines, 1898.
- Report for the Year 1898, Harry A. Lee, Commissioner of Mines, 1899.
- Biennial Report for the Years 1899-1900, Harry A. Lee, Commissioner of Mines, 1900.
- Biennial Report for the Years 1901-1902, Harry A. Lee, Commissioner of Mines, 1903.
- Biennial Report for the Years 1903-1904, E. L. White, Commissioner of Mines, 1905.
- Biennial Report for the Years 1905-1906, E. L. White, Commissioner of Mines, 1907.
- Biennial Report for the Years 1907-1908, T. J. Dalzell, Commissioner of Mines, 1909.
- Biennial Report for the Years 1909-1910, T. J. Dalzell, Commissioner of Mines, 1911.
- Biennial Report for the Years 1911-1912, T. R. Henahen, Commissioner of Mines, 1913.
- Biennial Report for the Years 1913-1914, T. R. Henahen, Commissioner of Mines, 1914.
- Biennial Report for the Years 1915-1916, Fred Carroll, Commissioner of Mines, 1916.
- Biennial Report for the Years 1917-1918, Fred Carroll, Commissioner of Mines, 1919.
- Annual Report for the Year 1919, Horace F. Lunt, Commissioner of Mines, 1920.
- Annual Report for the Year 1920, Horace F. Lunt, Commissioner of Mines, 1921.
- Annual Report for the Year 1921, Horace F. Lunt, Commissioner of Mines, 1922.
- Annual Report for the Year 1922, Horace F. Lunt, Commissioner of Mines, 1923.
- Annual Report for the Year 1923, John T. Joyce, Commissioner of Mines, 1924.
- Annual Report for the Year 1924, John T. Joyce, Commissioner of Mines, 1925.
- Annual Report for the Year 1925 was fully prepared but, because of lack of funds, was not printed. The manuscript is on file in the office of the State Bureau of Mines.
- Annual Report for the Year 1926, John T. Joyce, Commissioner of Mines, 1927.
- Annual Report for the Year 1927, John T. Joyce, Commissioner of Mines, 1928.

Annual Report for the Year 1928, John T. Joyce, Commissioner of Mines, 1929.

Annual Report for the Year 1929, John T. Joyce, Commissioner of Mines, 1930.

Annual Report for the Year 1930, John T. Joyce, Commissioner of Mines, 1931.

Annual Report for the Year 1931, John T. Joyce, Commissioner of Mines, 1932.

Annual Report for the Year 1932, John T. Joyce, Commissioner of Mines, 1933.

Annual Report for the Year 1933, John T. Joyce, Commissioner of Mines, 1934.

Annual Report for the Year 1934, John T. Joyce, Commissioner of Mines, 1935.

Annual Report for the Year 1935, John T. Joyce, Commissioner of Mines, 1936.

Owing to lack of funds the 1936 Annual Report of the State Bureau of Mines was not published.

Annual Report for the Year 1937, John T. Joyce, Commissioner of Mines, 1938.

Owing to lack of funds the 1938 Annual Report of the State Bureau of Mines was not published.

Annual Report for the Year 1939, Edward P. Arthur, Commissioner of Mines, 1940.

Annual Report for the Year 1941, Edward P. Arthur, Commissioner of Mines, 1942.

Annual Report for the Years, 1942 and 1943, Fred Jones, Commissioner of Mines, 1944.

List of Mines for the Year 1944, Fred Jones, Commissioner of Mines, 1945.

List of Mines for the Year 1945, Fred Jones, Commissioner of Mines, 1946.

Annual Report for the Year 1946, Fred Jones, Commissioner of Mines, 1947.

Annual Report for the Year 1947, Fred Jones, Commissioner of Mines, 1948.

Annual Report for 1948 was not published.

Annual Report for the Year 1949, Walter E. Scott, Jr., Commissioner of Mines, 1950.

Annual Report for the Years 1950 and 1951, Walter E. Scott, Jr., Commissioner of Mines, 1952.

Annual Report for the Year 1952, Walter E. Scott, Jr., Commissioner of Mines, 1953.

Annual Report for the Year 1953, Walter E. Scott, Jr., Commissioner of Mines, 1954.

Annual Report for the Year 1954, Walter E. Scott, Jr., Com-

Annual Report for the Year 1954, Walter E. Scott, Jr., Commissioner of Mines, 1955.

Annual Report for the Year 1955, Walter E. Scott, Jr., Commissioner of Mines, 1956.

#### FOREWORD

The Bureau of Mines of the State of Colorado was established by an Act of the Tenth General Assembly and approved March 30, 1895. The Bureau of Mines Law established the office of Commissioner of Mines which had been authorized by the Colorado State Constitution in 1876 (Article 16, Section 1), and charged the Commissioner of Mines, among other things, with the supervision of Metal Mine Inspection and the enforcement of laws relative to health and safety in Metal Mines. Subsequently, this Act was broadened to include "any ore mill, sampling works, smelter, metallurgical plant, rock quarry, clay pit, and rock excavations, tunnels, or mine workings of whatever kind or character, except coal mines."

The Thirty-sixth General Assembly in 1947 passed an Act requiring, in addition to the above, that the Commissioner of Mines conduct safety inspection of all oil wells, property and equipment appurtenant immediately and used in connection with producing oil wells and further charged him with the enforcement of laws relating to the health, safety, and welfare of any person employed in such wells, or other property.

From time to time, and by various opinions and decisions, the Colorado Bureau of Mines, under the direction of the Commissioner of Mines, has been authorized and empowered to make safety inspections of all underground metal or mineral mines, open pit or other surface mines, rock and mineral quarries, clay pits and mines, earth and rock dams, water canals, highway excavations, highway gravel pits, all rock excavations, rock tunnels or any mine workings of whatever kind or character (except coal mines), ore mills, mineral grinding plants, highway gravel crushing plants, sampling works, smelters, chemical plants producing a chemical from ore or minerals, metallurgical plants, oil and gas wells and all equipment and machinery used in connection with any of the above and all buildings thereon.

The Commissioner of Mines was authorized to make such rules and regulations as may be necessary for carrying out provisions of safety, and he has further been charged with the enforcement of laws relating to the health, life, safety and welfare of all persons employed in any of the above mentioned categories. The Commissioner, upon receipt of reliable information indicating any condition that might be injurious or dangerous to the health or safety of workmen employed in these places, or any time when he deems it necessary, makes inspections or has inspections made by the inspectors of the Bureau of Mines who report to him on any unsafe condition or unsafe practice. Whenever possible, all accidents are inquired

into and a record is kept giving complete information concerning accidents. All fatal accidents are promptly inquired into by an inspector and a complete written report, made to the Commissioner of Mines, becomes a part of the records of the Bureau of Mines.

The Bureau of Mines is required to disseminate such information concerning mining and minerals as may be required by the public, and when he has opportunity and means, the Commissioner of Mines is charged with collecting and preserving mineral specimens and accumulating technical and other data relating to mining, metallurgical processes and geology. He is also required to examine, report on and record the geological formation of important mining districts or mining areas.

The Commissioner of Mines has authority to undertake any research project which would be of assistance to those engaged in mining or which in any way would help to develop the mineral resources of Colorado. He is charged with the responsibility of making investigations regarding prospecting, buying, selling, transporting, treating and reducing ores and minerals, and of recording the progress of the mineral industry providing, of course, that he has means therefore to do so.

The Commissioner of Mines may, from time to time, with the consent of the Governor, compile, publish and distribute bulletins on subjects, districts and counties. When considering a county or district, the report shall give in detail the history of the locality, the geology, the record of mines and mills, the processes of treatment with results, and shall classify and locate mining property and prospects, together with maps of the same provided, of course, that there are appropriations for such work.

The first and foremost function of the Colorado Bureau of Mines is Safety Inspection. By inspections and investigations consistent efforts are made to see that safe methods and safe practices are used to protect the health, life, safety and welfare of all persons employed in the mineral and other industries under the jurisdiction of the Bureau.

The Bureau of Mines has in its custody one of the very finest mineral collections in existence. In addition to the specimens from all over the world, one of the most unusual features of this collection is the fact that it contains specimens of ore from all of the great mines of Colorado. While the collection is visited annually by thousands of tourists, it continues to be of much interest and concern to prospectors, miners, engineers, geologists and persons genuinely interested in Colorado's mineral

industry. Foreign engineers and geologists have been most enthusiastic about the Colorado collection. Many new specimens from Colorado mines were added to the collection during 1956.

In addition to their regular duties of inspection and investigation, Bureau of Mines Inspectors are qualified to teach standard U. S. Bureau of Mines First-Aid classes. Many such classes have been taught in all districts over the State and we feel that this instruction tends to promote safety in the minds of both the operator and miner as well as to provide trained personnel in the industry for emergency first-aid treatment. These classes are usually taught after hours; however, they can be taught any time that is convenient with the operator and employee and the Bureau of Mines welcomes the opportunity to provide this additional service upon application by the operator or any group connected with the mining industry. One member of our staff, G. A. Franz, Jr., is qualified to examine and issue cards to members of completed classes in Colorado and we hope to have most of our inspectors so rated in the future. During the year the Colorado Bureau of Mines has acquired six sets of Chemox Breathing Apparatus and our inspectors are available and qualified to give instruction in the emergency use of this equipment.

Advice and information are freely given to prospectors and small operators in order to further the State's mineral development but no written reports on mines are made and care is taken not to encroach on the proper field of consulting engineers and geologists.

Much of the work of the Bureau of Mines, including this report, would not be possible if it were not for the generous cooperation of other departments and agencies. It is impossible for us to thank individually the persons to whom we are indebted, but we are most grateful to all who have been helpful.

The compiling and preparations of this report have been the work of the entire staff of the Bureau, including the inspectors who furnished much of the data concerning their districts. Each and every member of the staff is to be congratulated and thanked for his most generous cooperation and help.

Every effort has been made to assure accuracy and completeness of the data used in the report but changes, due to removal and altered mining conditions, are constantly taking place which may cause some omissions or mistakes to appear in the publication. It will be most appreciated if any additions, corrections or errors are brought to the attention of the Colorado Bureau of Mines.

The publication of this report is authorized by Chapter 92, Article 32, Section 11, of the Colorado Revised Statutes, 1953.



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The principal producing districts in the State of gold, silver, copper, lead and zinc were:

- 1. San Miguel County
- 2. Eagle County
- 3. Gunnison County
- 4. Teller County
- 5. Dolores County
- 6. Lake County

The leading producers of gold, silver, copper, lead and zinc were:

GOLD Golden Cycle Corporation Cripple Creek, Colorado

SILVER Empire Zinc Division, The New Jersey Zinc Company, Gilman, Colorado

COPPER Idarado Mining Company Ouray, Colorado

LEAD Idarado Mining Company Ouray, Colorado

ZINC Empire Zinc Division, The New Jersey Zinc Company, Gilman, Colorado

The average prices of the above mentioned metals in 1956 were: Gold, \$35.00 per ounce; Silver, \$0.905 per ounce; Copper, \$0.419 per pound; Lead, \$0.160 per pound; and Zinc, \$0.135 per pound.

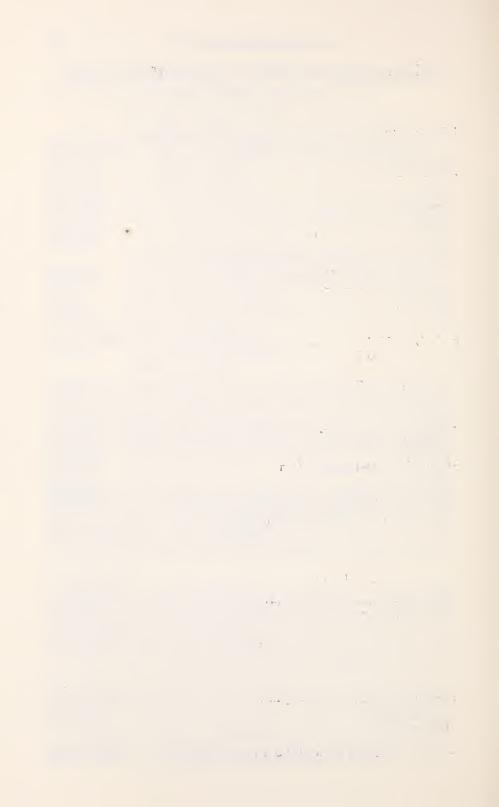
Colorado's petroleum production again reached a new record high of over \$166,000,000 in 1956. Production was recorded from 240 separate fields located in twenty-two different counties of the State. A total of 4,954 wells were drilled in 1956 with 1,565 being producers of oil, 833 producers of gas, and 2,556 considered dry holes, thus giving Colorado a success ratio of 48.40 per cent.

Rio Blanco County was first in production of oil in 1956 with over 30,620,000 barrels, Logan County was second with 7,971,445 barrels, and Morgan County was third with 7,372,139 barrels. The Rangely Weber Field was first with 27,894,644 barrels and the Adena Field in Morgan County was second with 5,625,833 barrels. With new fields being brought in each year and Colorado's wildcat drilling showing a remarkable success, the State's oil industry will no doubt continue to grow. An estimated \$64,000,000 was spent on oil and gas well drilling in 1956 and this figure is not included in production valuations.

Oil shale activities in Colorado have increased during the year which, no doubt, will in time tap Colorado's vast storehouse of this mineral and add to future petroleum production.

# PRODUCTION OF METALS, NON-METALLICS, PETROLEUM, 1956

	Metals
Uranium (Mining and processing with Vanadium	
by-products—Value to State)	\$124,500,000
Molybdenum	44,237,000
Zinc	
Lead	
Tungsten	
Copper	
Gold	
Silver	
Miscellaneous (Metals which cannot be	,- ,-
separated for production value)	1,440,000
Pyrite	
Beryllium	
Tin	
TOTAL	\$203,749,415
	Non-Metallics
Building and other stones	\$ 2,363,332
Cement	13,150,000
Clays	
Feldspar, Mica, etc.	
Fluorspar	
Limestone, Dolomite, etc.	2,906,248
Perlite	725,200
Sand and Gravel	10,889,000
Miscellaneous (Pumice, Gem Stones, etc.)	208,715
TOTAL	\$ 35,414,330
Consider Oil	Petroleum
Crude Oil	\$160,867,778
Gas (All classes, well head value)	6,000,000
TOTAL	\$166,867,778
	Recapitulation
Metals	
Non-Metallics	35,414,330
Oil and Gas	166 267 770
OII and das	100,007,770
TOTAL MINERAL PRODUCTION	\$406,031,523



#### CUSTER (2)

The Barnhisal Construction Company's Green Quarry near Rosita, which is owned by the Great Lakes Carbon Company, continued their steady production of perlite in 1956. Raw perlite is shipped to the Florence plant for sizing and from there it is shipped to other parts of the country for exfoliating. There was some development activity in the Wet Mountain Valley area and some production was reported from that district. The Tom Boy and Navajo lodes operated for a time during the year. John K. Banks shipped several cars of copper ore from the Dead Mule area, and the Defender and Passiflora Mines had part-time development. Turner & Son operated a small flotation mill part-time at Silver Cliff on ores from their local mine and dump.

#### DELTA (4)

Sand and gravel production in Delta County continued throughout the year at the Delta Sand & Gravel Company's pits and at the Hamilton pits at Cedaredge. Some surface mining was done at the Doty Sulphur pits between Delta and Hotchkiss. This sulphur is used for fertilizer manufactured by the Atlas Mining & Manufacturing Company of Delta. Some oil well drilling was done during the year and uranium prospecting continued.

#### DENVER (1)

Late in 1956 the Denver Research Institute began construction on their ASPECO oil shale research plant which, no doubt, will have a beneficial effect on future oil shale development in Colorado. Another addition to the development of Colorado resources is the Kerr-McGee metallurgical and research laboratory which was recently opened in Denver. This laboratory, under the direction of V. L. Mattson, will direct work on uranium processing research. The Denver plant of the General Chemical Division of the Allied Chemical & Dye Corporation maintained steady production during the year. The Consolidated Feldspar Plant of the International Minerals & Chemical Corporation and the American Smelting & Refining Company's Globe Plant operated at full capacity in 1956.

#### DOLORES (4)

Rico Argentine, the largest operation in Dolores County, has shown some production from the St. Louis Tunnel which, when completed, will connect with the Blaine workings some 500 feet above. Production of lead and zinc has been about the same as 1955. The tailings upgrading plant below the Rico Argentine Mill was completed during the year and this process will insure another year's supply of pyrite for the acid plant without securing tonnage from underground. E. J. Lane did some work at the Eagle Tunnel and the Jones Brothers operated the St. Louis Claim and their cleanup plant during the summer months. Uranium prospecting continued in the Dunton area.

#### DOUGLAS (2)

The Helmer open pit, operated by T. L. Helmer, and the Hogback Nos. 2 and 3, operated by the Robinson Brick & Tile Company, were heavy clay producers in the county during the year. Stroud Wisenhunt produced a large tonnage of clay from Stevens Ranch mine near Castle Rock.

#### EAGLE (3)

The Eagle Mine and Mill, operated by the Empire Zinc Division of the New Jersey Zinc Company, continued their large scale operations during 1956 without interruption. Development work continued on the lower levels of the mine and new electrical transmission equipment was installed. White, Green & Addison Company have moved their drilling equipment into the Edwards vicinity and will move to the Piney Ridge area later for uranium exploration. A large low-grade fault containing copper ore was located in the Fulford district and this is being worked from the surface with a bulldozer. R. J. Johnson & Associates are the owners of the property which was covered by twenty-one new claims. Uranium activity continues throughout the county and considerable development work has been done on uranium claims owned by the Sawmill Uranium Corporation and Basic Exploration Company. The Ideal Lava Products Company, producers of cinder blocks, operated throughout the year.

#### EL PASO (2)

Four operations were listed in El Paso County during 1956, which included the Hecla Clay Mine operated by Dale Hoover, the Castle Concrete Company, the Castle Quarry, and the Kathryn (uranium mine prospect) operated by Cliff & Creek Uranium Company. Uranium prospecting continued in the county with a reported discovery in the Garden of the Gods by Walter Miller and D. D. King. The Golden Cycle Corporation produced considerable tonnage of concrete aggregate from their Golden Cycle pit.

#### FREMONT (2)

Among the many and varied producers of Fremont County were the Burnito Quarry, producer of ganister; Copper Queen, producer of copper; Empire Zinc Company, producer of zinc; Colorado Fuel & Iron Works, producer of dolomite; Cowan Brothers, producers of travertine and building stone; and a host of others. Heavy production of limestone was made by American Crystal Company from their mine near Wellsville, and also by the Colorado Limestone Company from their quarries at Calcite. Coaldale Gypsum Quarry, owned and operated by the Fibreboard Paper Products, Incorporated (Pabco), shipped their product to their new two and one-half million dollar plant recently completed at Florence. Thorium prospecting has been heavy and there has been considerable talk

of converting the Parkdale plant into a thorium reduction plant. Jack S. Josey & Associates have received a Government contract for uranium exploration, which indicates encouraging prospects for uranium production in the county. Heavy aggregate, gypsum, travertine, beryl, marble, feldspar, columbium-tantalum, and sand and gravel add to Fremont County's mineral production. The Juniper Oil & Mining Corporation shipped several carloads of uranium ore from the Snooper-Dickson Mine late in the year. The quarry and plant of the United States Soil Conditioning Company at Wellsville operated throughout the year.

#### GARFIELD (3)

Garfield County ranks high as one of the many counties in the State to show increased mining activity. The Union Oil Company at Parachute Creek has made great strides this year in the development of their oil shale pit and extraction plant. Both Isbell Construction Company and Stearns-Roger Manufacturing Company have been contracting on this project all year. The Union Carbide Nuclear Company expects to have its new uranium reduction plant in operation by the fall of 1957, and this will increase the amount of uranium ores treated in this area. The old plant will continue in operation until the new plant is completed. The oil shale plant and mine formerly operated by the United States Bureau of Mines has been turned over to the Naval Petroleum Oil Reserves and additional activity can be expected from this Anvil Point area. There is some uranium production but prospecting and development continues in the county. Standard Uranium Company has completed a gas well in the western part of the county which flows over twenty-three million cubic feet per day.

#### GILPIN (1)

Although inactive during the latter part of the year, the Glory Hole, Inc. and the United Mining & Leasing Company did considerable work on their properties early in 1956. The Consolidated Gold & Uranium Company operated the Treasure Key Tunnel and extended the main tunnel for a considerable distance toward undeveloped ore reserves in the Lake Gulch area. The Cherokee Uranium Mining Corporation operated its Cherokee and Widow Woman properties during the year. Thirty-nine separate operations were listed in the county during the year, which showed an increase in activity over 1955. Uranium prospecting continued at a high pitch during the weeks, as well as over week-ends, and many small deposits were located. Most of the activity throughout the year was in cleaning out and sampling old properties, and new work in unexplored areas was at a minimum. The Realty Company did some work on a raise to connect the Calhoon and Wood properties. Large amounts of peat were shipped from the bogs of Gus Rudolph and the Braecher Ranch Company.

#### GRAND (3)

William Brown & Associates have operated the No Name uranium property during 1956. This mine is one of the highest uranium deposits in the State and is located near the top of Jones Pass at 12,543 feet in elevation. The ore is known as autunite.

#### GUNNISON (3 & 4)

Mining activity in Gunnison County has shown a steady increase for the past two years in both uranium and base metals. The Gunnison Mining Company, owner and operator of the Los Ochos property, has secured a permit to construct a mill near Gunnison which will treat uranium ores from the district. Atlas Uranium Corporation, operator of the Hawkeye property, has constructed a mill near Crested Butte and this plant will be expanded for more tonnage before spring. Vulcan Silver Lead Company's operations in the Marshall Pass area are showing promising results and James Dunn, its manager, expects to have the property in production very soon. American Smelting & Refining Company's Keystone property near Crested Butte has been producing all year and this operation has greatly increased silver, lead, zinc and copper production in the county. Some other operations starting this year are the Carter and Raymond on Gold Creek, the Daisy Mine operated by the Redwell Basin Mining Ventures, the Willow Creek Mine, and the Brown Derby.

#### HINSDALE (4)

Although considerable interest has been shown in Hinsdale County mining properties, very little actual production was listed in 1956 from this former large-producing county. Moab Uranium Company did some work on the Detroit, Gnome and Golden Wonder properties and the Intermountain Engineering Company worked the Gold Quartz property during the summer months. Mendenhall and Pray shipped some high-grade gold and silver ore from the Pelican and Black Crooke Mines. Some work was done at the Rodney portal.

#### HUERFANO (2)

Low grade uranium deposits have been located in the Gardner Basin district and many large companies have been interested in the district and have staked claims. Experimental work has been done on up-grading the low-grade ores so that the same can be made commercially practical. Future production will depend on the success of this process. Some wildcat oil well drilling was done in the county during the year.

#### JACKSON (3)

Ozark-Mahoning Company at Cowdrey operated their North Gate Mill all year on steady tonnage from their Whale Pit and Two Hundred Level fluorspar mines. Although production lagged during the summer months due to the expiration of the Government stockpile and price support program,

full scale operations were resumed when this support plan was re-established. Development work continued on the Alcoa shaft under the direction of the Mine Management Corporation, and Harold Rosenfield did considerable work at the Cap Rock Mine. The Continental Oil Company, Lion Oil Company and other oil operators and producers were very active in the county during the year.

#### JEFFERSON (1)

Jefferson County remained the State's largest producer of clay in 1956 with steady production coming from the State Quarry, from the Strainland, Church, Rubey, Rockwell, Pierce, Lariat, Lakewood, Johnson, Hedley, Chieftain, Cass, Green Mountain and other mines. The Schwartzwalder uranium property on Ralston Creek was purchased this year by the Denver-Golden Oil & Uranium Company, which resulted in stepped-up activity at all of their properties in the county. Large deposits of primary and secondary ore have been developed and this has produced large shipments of uranium ore of exceptionally high value. Several mining companies have completed arrangements for DMEA loans for development purposes, and claim filing and prospecting in the county is at a high pitch. The Beryl Ores Company continued their program of purchasing and treating beryl ore, although no large production from the county was reported. Sand and gravel production increased over 1955 and some gold was recovered from these operations. Considerable wildcat drilling for oil was reported in the early part of the year.

#### KIT CARSON (1)

Oil activity remained about the same in Kit Carson County during 1956. However, the Seaboard Oil Company has plans for further exploration in 1957. No production was recorded from the county.

#### LAKE (3)

Lake County leads all other counties in the State in both dollar value and tonnage production of metallic minerals. The Climax Molybdenum Company, with the completion of a new milling unit this year, has maintained its record production of over 32,000 tons per day. This tonnage comes from both the Storke and Phillipson Levels which were connected with an ore pass, thus enabling ores from the Phillipson to be crushed at the Storke Level crushing plant. Ryan Construction Company completed installation of a 30-inch water line from Robinson Lake to the industrial tank at Climax. The Resurrection Mining Company completed rehabilitation of its mill, which makes this one of the most modern 400-ton units in the State. Resurrection's joint development with the American Smelting & Refining Company on the Irene property has been encouraging and new fire-proof surface buildings were erected near the shaft collar during the year. Its other properties, the Helena

and Julia Fiske, operated throughout the year. Cadwell Mining Company operated the Hayden Shaft property and the Jones Leasing Company operated the Resurrection No. 2 until the surface buildings were destroyed by fire during the summer. Very encouraging reports have been released from the American Smelting & Refining Company's Arkansas Valley smelter regarding increased and continuous tonnages from all over the State and area. Boyle Brothers are contracting to open and re-timber the Carlton Tunnel owned by the High Line Canal Company.

#### LA PLATA (4)

Oil well drilling in the Red Mesa area continued throughout the year and several new producers were reported. From Ignacio south to the New Mexico border and west to the Utah border, gas well drilling brought in many new wells which make this area a heavy gas producer in the State. The Vanadium Corporation of America's Durango plant operated consistently throughout the year at capacity tonnage. Uranium ore was received from Colorado, Utah, and New Mexico. Zodomoc Mines, Inc. has started construction of a new mill at the mouth of La Plata Canyon and ores from the Bessie G Mine will be treated there. Reported high-grade ore was shipped from the Muldoon property located high in the La Plata mountains. Other properties, including the Aller Tunnel, the Brawner Tunnel, the Knoll Mine and the Nevada Good Hope, were active.

#### LARIMER (1)

The Boettcher Quarry at La Porte, operated by the Ideal Cement Company, substantially increased its production during the year and quarry transportation was changed from railway to large diesel trucks. New plant facilities were added to accommodate the increased tonnage. The Norberg Lime Quarry and the United States Gypsum Company maintained a steady output for the year and other quarrying operations by Jacobson-Evans and Ohline, as well as several smaller operations, were continuous throughout the year. The Uranium Queen Exploration Company has opened and developed a sizeable deposit of uranium ore at its Uranium Queen Mine west of Fort Collins. Many other uranium properties were worked with some production recorded from the county. Sand and gravel continued to add to Larimer County's production. Oil activity was on the increase with several new wells completed around Loveland.

#### LAS ANIMAS (2)

The Santa Fe Clay Mine, owned by the Standard Fire Brick Company and operated by the Scott-Ruiz Coal Company, maintained steady production of clay during the year. The Trinidad Brick & Tile Company operated its surface clay pit without interruption. Several oil companies were active in the county during the year with exploratory drilling.

#### LOGAN (1)

Logan County remained second in the State for oil production during 1956 with 65 active fields producing nearly 8,000,000 barrels of oil. Exploration and wild cat activity showed a decline during the year which indicates that this county has settled down to a steady production. Nineteen fifty-six production was slightly less than 1955.

#### MESA (4)

In addition to Mesa County's uranium and oil activity, negotiations were made during the year for development of oil shale deposits near De Beque by the Oil Shale Corporation. Scattered oil drilling was done in the west end of the county with encouraging results. Mesa County has maintained its second place in uranium production in the State and new deposits, as well as old ones, have been developed. Activity on Calamity Mesa, Beaver Mesa, Outlaw Mesa, Blue Mesa and other districts in the county continued with a high rate of production. Testing and sampling facilities were expanded at the Grand Junction AEC plant and the Climax Uranium Company operated its reduction mill at full capacity all year. The American Gilsonite Company is constructing a multimillion dollar refinery northwest of Grand Junction and the plant will operate on material piped in from Utah.

#### MINERAL (3)

With the completion of the new Emperius Mill at Creede and the actual starting of operations in the latter part of the year at the Commodore and Amethyst Mines, production from this county is above 1955. The new modern mill of the Emperius Mining Company was constructed to replace the old mill that burned in 1955. The Gormax Mining Company has completed negotiations for a DMEA loan to explore for lead-zinc ore on its property. Both the Sublet and Outlet Mining Companies were active during the year, and uranium prospecting continued with reported success. Diversified Resources, Inc. did some test drilling on the sulphur deposit beds near the town of Creede.

#### MOFFAT (3)

Uranium development in Moffat County continued throughout 1956 and the Trace Elements Company, in addition to the operation of its Bromide and Marge shaft properties, negotiated for the construction of a mill at Maybell for treatment of uranium ores in the district. Late in the year it was announced that the Union Carbide Nuclear Company had taken over the Trace Elements property and would continue with the construction of the mill. The Western Exploration Company and the Jacobs Chair Mining Company were among those active in uranium development during the year. Considerable wildcat oil drilling was done in addition to the steady production coming from Hiawatha Dome, Powder Wash, Tow Creek, Isles Dome, Maudlin Gulch and the Elk Springs oil fields.

#### MONTEZUMA (4)

With uranium coming from the Roberta-Jean Mine and continuous development on the Cross No. 1, Blue Eagle and Yellow Lizzard Mines, Montezuma County can show uranium production for the first time. George Gilmore conducted development work at the Red Arrow Mine during the summer and this once famous gold producer north of Mancos shows encouraging indications for future production. The Colorado Carbonics Plant in McElmo Canyon had a steady production of CO<sub>2</sub> during the year. Several oil well rigs were drilling in the McElmo Canyon area near the Utah border.

#### MONTROSE (4)

With over 130 operating uranium mines in the county, Montrose continues to be the State's largest producer of uranium ore. In addition to these operating properties two reduction plants are located within the county: one at Naturita, operated by the Vanadium Corporation of America, and one at Uravan, operated by the Union Carbide Nuclear Company. Capacity of both plants has been increased during the year. The Uravan plant has recently completed construction of a water reclamation and tailings disposal unit on Club Mesa above the mill. Prospecting and development projects are scattered over the entire county and new deposits have been located on Long Park, Monogram Mesa, Atkinson Mesa, Bull Canyon, Gypsum Valley, Paradox Valley, Carpenter Flats, Carpenter Ridge and many other areas in the county. A new mill will be constructed at Bedrock in Paradox Valley by the Atomic Fuel Extraction Corporation. This mill is scheduled to be in operation in 1958. In addition to uranium activity the St. Helena Petroleum Corporation and the Pure Oil Company are drilling wildcat wells on Horse Fly Mesa and northeast of Montrose.

#### MORGAN (1)

Oil activity in Morgan County showed an increase in 1956 with considerable off-set drilling being done in the latter part of the year. Oil production this year was slightly under the 1955 figure although the Adena field remained second in production in the State. Production came from thirty-two active fields.

#### OURAY (4)

Notice was received late in the year that King Lease operations in Ouray County would terminate and that the Camp Bird, Limited would take over the property. Present plans call for a year of development and exploration by the English company, owners of the property, during which time new milling facilities will be installed. King Lease has had a continuous operation at the famous old Camp Bird Mine for the last thirty years. The Idarado Mining Company announced late

in the year that all tonnage from the Red Mountain side of its property would be milled at its new installation at Telluride which has a capacity of 1,400 tons per day. Utaco Uranium, Inc. has re-conditioned its Silver Shield Mill at Ouray and is operating on ores from the Bradley Mine at Telluride. Operations at the Mayflower Mining Company's property above Ironton continued throughout the year and some mining was started at the Pony Express Mine below Ouray. Other operators were Porter & Son at Brown Mountain, and the new Rolling J. Mill below Ouray.

#### PARK (2)

Mining activity in Park County showed a marked increase this year over 1955 with over thirteen separate properties in operation. A new beryl discovery was reported on the old Boomer property northwest of Lake George and ore was shipped from this property during the year. In addition to the Montgomery Dam project, the Blue River Constructors assumed active charge of the Harold B. Roberts water tunnel at Grant. This project is being pushed toward the west portal at Dillon. Some uranium production was reported from the Parco property. The Leadville Lead & Uranium Company did considerable development work in the Horseshoe area. Other gold, silver, lead and zinc properties in operation during the year were the Betty, Buckskin Joe, Ling, Queen Mary, W. G. Mine, Alma Placer, Douglas Quarry, and the Sugar Loaf Quarry. The Shell Oil Company drilled five wells in South Park near Hartsel.

#### PHILLIPS (1)

An increased amount of wildcat oil drilling was done in Phillips County during 1956 but no production was recorded. More activity is planned for 1957.

#### PITKIN (3)

The Smuggler Mine has been operated intermittently by John F. Lewis and small shipments of ore were made to the smelter in Leadville. The Roaring Fork Pumice Production Company, operated by E. H. Bone, continued to manufacture building block from pumice stone recovered from an open pit quarry, and the Borealis Mining Company of Aspen started work at the old Montezuma Mine.

#### PUEBLO (2)

Active operations in Pueblo County during 1956 were the International Minerals & Chemical Company's Mica Grinding plant, the Standard Fire Brick Company's Chamblin & Rock Creek Mines, the Pueblo Clay Products Company's Meadow No. 5, Stone City Nos. 1, 2 and 6, and Arthur Wands' Nellie Helen Clay Mine. Clay production continued throughout the year and uranium prospecting was again evident but no production was reported. Sand and gravel production continued to be heavy. Some oil activities were reported in the county during the year.

#### RIO BLANCO (3)

Considerable wildcat drilling was done in Rio Blanco County in the Pieance Creek area which resulted in increased gas production. There were several new shallow wells drilled in the Rangely Field which also were very good producers. Rangely Field, the largest oil producer in the State, operated continuously throughout the year. There also was a considerable amount of uranium exploration done in Rio Blanco County east of Meeker on Uranium Peak. Some shipments were made from this area during the summer months.

#### RIO GRANDE (3)

The Summitville Mines, operated by the General Minerals Corporation, did considerable cleaning and retimbering at the Reynolds-Morse property near Summitville. Except for uranium prospecting, no other operations were reported.

#### ROUTT (3)

The Copper King Mine, operated by McFarland and Hullinger of Tooele, Utah, made shipments of copper-silver ores and the McCoy Aggregate Company shipped a considerable tonnage of scoria from its quarry six miles northwest of McCoy. Uranium exploration and wildcat oil drilling were responsible for increased activity in the county.

#### SAGUACHE (3 & 4)

Superior Mines Corporation has sold controlling interest in the Rawley, Superior and Erie Group of claims to the National Minerals Corporation and increased activity can be expected in the Bonanza area. Plans call for construction of a 100-ton mill and rehabilitation of the Rawley No. 12 Tunnel for a distance of 6,500 feet. In addition to its own ore, the National Minerals Corporation will do custom milling. Uranium activity has again increased in the west end of the county and the Gunnison Mining Company has enlarged installations at the Los Ochos property. In addition to its mining activity this company has secured a permit to construct a mill near Gunnison that will treat ores from the area. The Rawley No. 3, operated by William Costello of Bonanza, continued to operate throughout the year. Ores from the Marine Lode, Wheel of Fortune, Cliff Mine, Jupiter and others will be treated in the new mill constructed by Dan Schmidt & Company.

#### SAN JUAN (4)

San Juan, formerly one of the great producing counties in Colorado in both base and precious metals, has received encouragement during 1956 for a revival of mining activities. The Treasure Mountain Mining Company, a consolidation of the Gold King, Golden Monarch, Lead Carbonate and Pride of Bonita, started operations during the year which will eventually connect all of the above mines to the lower Gold

King and Sunnyside Tunnels. The Lead Carbonate Mill has been re-conditioned to handle ore from these properties on a test basis until future development warrants a mill of larger capacity. Operations at the Pride of the West Mine and the Pride Mill continued for a part of the year. The Mountain Top Mining & Milling Company started development work on the Dora Mine. The Graysill group of claims, operated by the Vanadium Corporation of America, produced vanadium ore all during the year. Many other smaller properties operated during the summer months and production in San Juan County showed an increase.

#### SAN MIGUEL (4)

San Miguel County ranked high among the uranium producing counties in the State, with new deposits being opened in the Slick Rock, Spud Patch and upper San Miguel areas. A new up-grading plant is under construction near the old town of Slick Rock, and Union Carbide Nuclear Corporation will accept ores from the area as well as from the company's own mines in the district. Some of the other larger operators in the county are the Dulaney Mining Company, Skidmore Mining Company, the Ortmayer Mining Company, and a host of others that have been in production all during the year. The Idarado Mining Company has consolidated all of its milling activities in the Pandora unit at Telluride. Ore formerly milled at the Red Mountain unit is now being processed on the Telluride side. Idarado's mining development program is nearing completion and its production has added materially to the State's increased volume. The Cataract Uranium Mining & Exploration Company has opened the San Juan Mine at Matterhorn. Utaco Uranium, Inc. opened and started production at the Bradley Mine near Telluride. Mining activities in San Miguel County have a very bright future outlook.

#### SUMMIT (3)

Activity in Summit County increased during 1956 with the addition of several new discoveries, including fluorspar which was shipped from the Blue Star Mine, and manganese which was shipped from the Juanita manganese mine. Production continued at the Wellington, Boss, Big Four, Burke-Martin Mines, Moskal Leasing Company, Chataqua, Silver Wing and other properties. Considerable uranium prospecting was evident generally over the county. With the starting of the west portal of the Harold D. Roberts Tunnel and the 920foot shaft, which will create two additional headings on the twenty-three mile tunnel, more men are employed in the county than in many years. This contract for the Roberts Tunnel, held by the Blue River Constructors, will provide activity in the county for several years to come. The loss of the Governor Mill which was completely destroyed by fire during the year, is a setback in mining for this area.

#### TELLER (2)

Mining activity for 1956 in Teller County showed a steady improvement over 1955, with considerable new prospecting and development work on the lower levels of old producers. This low-level activity was made possible by the extension and connection of the Carlton drainage tunnel with more of the older properties. The Carlton Mill operated steadily throughout the year on an average of more than 11,000 tons per month. Most of the new ore came from the Ajax, Cresson and Strong Mines, with additional tonnage coming from the El Paso, Golden Cycle, and Modoc properties. Development on the 3,000 and 3,100 foot levels of the Ajax showed promising results, and the re-conditioning of the Vindicator Shaft should increase the available ore in the district. The Deadwood Mine on Bull Hill, owned by United Gold Mines and operated by Lloyd Stoner of the Deadwood Leasing Company, had good production for the full year. Uranium activity in the county has not reached the production stage, but prospecting and development continues with some encouraging results. The Moore and Divide Peat Bogs continued production during the year. The Golden Cycle Corporation celebrated its fiftieth year of operation during the year.

#### WASHINGTON (1)

Several new oil fields were developed in Washington County during the year and production amounting to 7,184,004 barrels came from twenty-six separate fields. A good many new wells were drilled with above-average success which no doubt will keep Washington County high on the list of producers.

#### WELD (1)

The California Company developed several new wells in the Pierce area in 1956, and their Black Hollow field continued production throughout the year. Several drilling contractors have been active during the past year.

# PRODUCTION BY COUNTIES 1956

ADAMS COUNTY		
Area 1251 square miles 3 plants and oil wells—93 men		
Gold Silver	\$	43,400 100
Total	\$	43,500
Petroleum		2,935,465
TOTAL PRODUCTION FOR COUNTY	\$	2,978,965
ARAPAHOE COUNTY Area 820 square miles 1 plant, oil wells—20 men Uranium		TLETON Restricted
ARCHULETA COUNTY * PAGO Area 1364 square miles Oil wells—50 men Petroleum	OSA S	PRINGS 417,137
TOTAL PRODUCTION FOR COUNTY	-	417,137
	,	ANIMAS
Area 1543 square miles Oil—20 men		
Petroleum	\$	13,153
TOTAL PRODUCTION FOR COUNTY	\$	13,153
BOULDER COUNTY Area 758 square miles 29 mines, 13 plants, 8 quarries, and oil—337 men		DULDER
Gold Silver Copper Lead Tungsten	\$	7,500 36,500 4,200 24,100 1,060,000
Total	\$	1,132,300
Clay Fluorspar Peat Building stone Crushed stone Sand and gravel		4,100 1,733,465 35,000 1,220,000 22,000 289,000
Total	\$	3,303,565
Petroleum		7,645
TOTAL PRODUCTION FOR COUNTY	\$	3,311,210

CHAFFEE COUNTY  Area 1040 square miles 16 mines, 5 quarries, 3 plants—119 men	* (	SALIDA
SilverUranium		800 estricted
Total	\$	800
Calicum phosphate Feldspar Limestone Monumental stone Gypsum Mica		1,900 351,000 1,341,000 90,000 130,200 4,200
Total		
TOTAL PRODUCTION FOR COUNTY	\$	1,919,100
CLEAR CREEK COUNTY * G	EORG	ETOWN
Area 395 square miles		
46 mines, 8 plants, 2 placers, 1 quarry—285 men Gold Silver Copper Lead Zinc Beryl		141,600 49,900 27,600 90,300 41,000
TOTAL PRODUCTION FOR COUNTY	\$	351,400
Area 1220 square miles	* SA	N LUIS
1 quarry—5 men Volcanic cinders	\$	64,000
TOTAL PRODUCTION FOR COUNTY	\$	64,000
CUSTER COUNTY  Area 738 square miles 2 mines, 1 quarry—14 men	WEST	CLIFFE
Gold Silver Copper Lead		2,900 1,200 4,000 1,500
Perlite		9,600 725,270
TOTAL PRODUCTION FOR COUNTY	\$	734,870

DENVER COUNTY Area 67.1 square miles 3 plants—338 men	* DENVER
Gold	\$ 16,695
TOTAL PRODUCTION FOR COUNTY	\$ 16,695
DOLORES COUNTY	* DOVE CREEK
Area 1029 square miles 5 mines, 3 plants—148 men Gold Silver Copper Lead Zinc Pyrite TOTAL PRODUCTION FOR COUNTY	8,900 750,000 702,000 150,000
	' '
DOUGLAS COUNTY  Area 844 square miles 5 quarries—16 men	* CASTLE ROCK
Clay Limestone	
Silica rock	3,100
TOTAL PRODUCTION FOR COUNTY	\$ 85,921
EAGLE COUNTY	* EAGLE
Area 1686 square miles	
1 mine, 1 plant, 3 quarries—550 men Gold Silver Copper Lead Zinc Pyrite	\$ 321,000 710,000 700,000 1,300,000 5,250,000 10,000
Total	\$ 8,291,000
Volcanic cinder	15,000
TOTAL PRODUCTION FOR COUNTY	\$ 8,306,000
EL PASO COUNTY * COLO	RADO SPRINGS
Area 2159 square miles 1 mine, 3 quarries—95 men Clay Limestone Sand and gravel Building stone	\$ 151,100 186,000 1,840,000 300,000
TOTAL PRODUCTION FOR COUNTY	\$ 2,477,100

FREMONT COUNTY	* CANOI	V CITY
Area 1562 square miles		
4 mines, 2 plants, 12 quarries, oil—267 men Silver Copper Beryl Tantalum		20 1,600 25,000 300
Uranium	Re	estricted
Total	\$	26,920
Clay Cement & Plaster Dolomite Feldspar Gypsum Limestone Mica Monumental stone Silica rock Terrazzo chips (marble) Travertine		47,600 3,850,000 343,927 14,000 140,000 420,000 4,300 100,500 28,100 23,800 11,300
Total		0.983.527
Petroleum	· ·	80,907
TOTAL PRODUCTION FOR COUNTY  GARFIELD COUNTY  Area 3000 square miles 1 mine, 2 plants, 2 quarries—336 men Limestone Marble	WOOD SF	
TOTAL PRODUCTION FOR COUNTY	\$	75,100
	CENTRA	
Gold Silver Copper Lead Zinc Tungsten	\$	16,500 15,900 4,200 40,100 6,200 450
Total	\$	83,350
Peat		10,000
TOTAL PRODUCTION FOR COUNTY	\$	93,350
GRAND COUNTY * HOT SULE Area 1869 square miles	PHUR SF	RINGS
1 mine—4 men Uranium	Re	stricted

GUNNISON COUNTY	* GUNNISON
Area 3243 square miles	
15 mines, 3 mills, 1 quarry—178 men	
Gold	\$ 23,000
Silver	
Copper	485,200
Lead	655,000
Zinc Beryl	
Lepidolite	
Tungsten	
Total	
Mica	
Columbium-Tantalum	
Building marble, Crushed	
Total	\$ 13,132
TOTAL PRODUCTION FOR COUNTY	
HINSDALE COUNTY	* LAKE CITY
Area 1062 square miles	
4 mines—12 men	
Gold	
Silver	
Lead	
Zinc	
TOTAL PRODUCTION FOR COUNTY	\$ 1,100
JACKSON COUNTY	* WALDEN
Area 1628 square miles	
4 mines, 1 plant, 1 quarry, oil—198 men	
Fluorspar	\$ 1,606,850
Total	\$ 1,606,850
Petroleum	1,987,335
TOTAL PRODUCTION FOR COUNTY	\$ 3,594,185
JEFFERSON COUNTY	* GOLDEN
Area 791 square miles	GOLDEIT
17 mines, 7 plants, 14 quarries, oil—217 men	
Gold	\$ 12,200
Silver	100
Beryl	2,000
Uranium	Restricted
Total	\$ 14,300
Clay	535,600
Feldspar	30,200
Sand and gravel	3,700,000
Mica	3,200
Total	\$ 4,269,000
Petroleum	7,769
TOTAL PRODUCTION FOR COUNTY	\$ 4,291,069

LAKE COUNTY Area 384 square miles	* LEADVILLE
Gold Silver Copper Lead Zinc Tin Molybdenum Tungsten Pyrite	\$ 180,000 85,200 100,700 515,000 545,000 20,000 44,237,000 3,561,000
Tota Peat Silica rock Sand and gravel	4,000
	al \$ 143,100 R COUNTY \$49,627,000
LA PLATA COUNTY Area 1691 square miles 6 mines, 2 plants, oil—420 men Gold Silver	
D 4 1	\$ 19,200 27,443 R COUNTY \$ 46,643
LARIMER COUNTY Area 2640 square miles 6 mines, 3 plants, 8 quarries, oil—	* FORT COLLINS
Gypsum Limestone Cement Sand and gravel Building stone Beryllium	\$ 108,500 204,200 4,300,000 106,000 454,000 5,000 Restricted
	\$ 5,179,800 499,700
TOTAL PRODUCTION FOR	R COUNTY \$ 5,679,500

LAS ANIMAS COUNTY Area 4798 square miles	* TRI	NIDAD
2 quarries—48 men Alabaster Clay		6,100 390,180
TOTAL PRODUCTION FOR COUNTY	\$	396,280
LOGAN COUNTY Area 1849 square miles Oil—600 men	* STE	CRLING
Petroleum	\$2	1,921,473
TOTAL PRODUCTION FOR COUNTY	\$2	1,921,473
MESA COUNTY * GRAN Area 3334 square miles	ID JUN	ICTION
66 mines, 2 plants, oil—1696 men Sand and gravel Uranium-vanadium	\$ Re	131,000 estricted
TOTAL PRODUCTION FOR COUNTY	\$	131,000
MINERAL COUNTY  Area 923 square miles 6 mines, 1 plant, 1 quarry—117 men Gold Silver Copper Lead Zinc	\$	52,000 175,000 16,800 450,000 350,000
TOTAL PRODUCTION FOR COUNTY	\$ 1	,043,800
MOFFAT COUNTY Area 4761 square miles 4 mines, oil—317 men Uranium-vanadium		CRAIG
Petroleum		3,516,641
TOTAL PRODUCTION FOR COUNTY	\$ 3	3,516,641
MONTEZUMA COUNTY Area 2097 square miles 4 mines, 2 plants, oil—69 men	* C	ORTEZ
Petroleum Dry ice	\$	15,614 77,000
TOTAL PRODUCTION FOR COUNTY	\$	92,614

MONTROSE COUNTY Area 2240 square miles 140 mines, 2 mills — 1618 men	* MC	NTROSE
Uranium-Vanadium		Restricted
MORGAN COUNTY  Area 1300 square miles Oil — 700 men Petroleum		MORGAN 20,273,381
TOTAL PRODUCTION FOR COUNTY	_	20,273,381
OURAY COUNTY	·	OURAY
Area 540 square miles 10 mines, 4 mills — 374 men Gold Silver Copper Lead	\$	120,000 50,100 150,200 251,100
Zine		140,200
TOTAL PRODUCTION FOR COUNTY PARK COUNTY	* FA	711,600 AIRPLAY
Area 2178 square miles 8 mines, 2 quarries — 212 men		
Gold Silver Lead Copper	·	3,000
TOTAL PRODUCTION FOR COUNTY		
PITKIN COUNTY Area 975 square miles 2 mines — 13 men Silver	\$	* ASPEN
Lead		310
TOTAL PRODUCTION FOR COUNTY		430
PUEBLO COUNTY  Area 2414 square miles	*	PUEBLO
1 plant, 7 quarries — 121 men Silver Copper		5 1,000
Clay T Sand and gravel Mica		1,005 200,600 1,090,000 61,020
T	otal\$	1,351,620
TOTAL PRODUCTION FOR COUNTY		

RIO BLANCO COUNTY Area 3264 square miles 8 mines, oil — 533 men	* 7	IEEKER
Uranium	R	estricted
Petroleum	\$8	4,207,244
TOTAL PRODUCTION FOR COUNTY	\$8	4,207,244
RIO GRANDE COUNTY	* DEL	NORTE
Area 916 square miles		
1 mine — 10 men		
Gold	\$	1,750
TOTAL PRODUCTION FOR COUNTY	3	1,750
ROUTT COUNTY * STEAMB	OAT S	PRINGS
Area 2331 square miles		
1 mine, 1 quarry, oil — 57 men	-	
Uranium Petroleum	R	
TOTAL PRODUCTION FOR COUNTY	\$	179,291
SAGUACHE COUNTY	* SAG	UACHE
Area 3146 square miles		
13 mines, 1 mill, 1 quarry — 125 men		1 000
Gold	\$	
Silver Copper		1,500 1,200
Lead		16,400
Zinc		7,450
Total	al \$	27,550
Turquoise	i1 φ	33,413
Uranium	R	estricted
	1 \$	,
TOTAL PRODUCTION FOR COUNTY	\$	60,963
SAN JUAN COUNTY	* SILV	ERTON
Area 392 square miles		
19 mines, 2 mills — 150 men		10.000
Gold	\$	18,600
Silver		31,300 28,900
CopperLead		146,000
Zinc		56,700
Tungsten		1,900
Uranium	R	estricted
TOTAL PRODUCTION FOR COUNTY	\$	202 400
TOTAL PRODUCTION FOR COUNTY	- 3	283,400

SAN MIGUEL COUNTY Area 1284 square miles	* TELLURIDE
81 mines, 3 mills, oil — 670 men Gold Silver Copper Lead Zinc Bog iron Uranium	2,230,000
TOTAL PRODUCTION FOR COUNTY	\$ 9 633,060
SUMMIT COUNTY * BF	RECKENRIDGE
Silver Copper Lead Zinc Manganese	169,000 169,900 4,100
TOTAL PRODUCTION FOR COUNTY	\$ 374,200
TELLER COUNTY  Area 555 square miles 9 mines, 1 mill, 4 quarries — 213 men Gold Silver	\$ 1,860,000 6,000
Monumental stone Peat	\$ 1,366,000 12,000 6,200
	18,200
TOTAL PRODUCTION FOR COUNTY	\$ 1,834,200
WASHINGTON COUNTY Area 2530 square miles Oil — 200 men	* AKRON
Petroleum Petroleum	\$19,756,011
TOTAL PRODUCTION FOR COUNTY _	\$19,756,011
WELD COUNTY Area 4033 square miles Oil, 2 plants — 120 men	* GREELEY
Petroleum	\$ 5,019,539
TOTAL PRODUCTION FOR COUNTY *County Seats	\$ 5,019,589

### SAFETY AWARDS

The following list of companies, all of whom employed ten or more men, worked the entire year of 1956 without a lost-time accident and were the recipients of Colorado Bureau of Mines Safety Awards:

Barnes Brothers, Nucla

Barnhisel Construction Company, Great Lakes Carbon Quarries, Westcliffe

Colonna & Company, Canon City

Denver Fire Clay Company, Denver

General Chemical Division, Allied Chemical & Dye Corporation, Denver

General Chemical Division, Allied Chemical & Dye Corporation, Jamestown

General Chemical Division, Allied Chemical & Dye Corporation, Valmont

Ralph D. Hickman, Gateway (Top award)

E. T. Holderman, Uravan

Ideal Cement Company, Fort Collins

Ideal Cement Company, Portland

International Minerals & Chemical Company, Denver

International Minerals & Chemical Company, Pueblo

Javernick and Vorgeson, Uravan

New Jersey Zinc Company, Empire Zinc Division, Canon City

The Noble Drilling Company, Casper, Wyoming

Oil Group Limited, Rangely

George W. Parfet Estate, Golden

Phillips Petroleum Company, Rangely

Sharples Oil Company, Rangely

Standard Fire Brick Company, Pueblo

Sterling Sand and Gravel Company, Fort Collins

The Texas Company, Craig

Union Carbide Nuclear Company, Mining Division, Grand Junction

United States Atomic Energy Commission, Denver area National Lead Company, AEC Contractors, Grand Junction

Lucius Pitkin Incorporated, AEC Contractors, Grand Junction

United States Gypsum Company, Loveland

### ACCIDENTS

During the year 1956 there were fourteen fatal accidents in the mineral industry, an increase of two over the year 1955. Ten of these accidents occurred underground, there was one fatal in a milling plant and one in a smelter and two occurred at oil wells. Falling rock caused four of the underground fatals and improper blasting procedure was responsible for three more. One underground fatal was caused by falling rock knocking a man down a raise and crushing him, one victim was suffocated when ore on which he was standing caved under him, and one fatal was caused by the worker being crushed between cars in an incline shaft.

The mill accident was caused by electrocution and the smelter accident by a furnace explosion. The oil well accident was the result of a catline entanglement and in the other the victim's head was crushed by the dropping of a drill stem. For the first time in several years there was a decrease in oil well fatalities.

A total of 36,921,400 man-hours was worked in the industry in 1956 with a total of 1,339 lost-time injuries which resulted in 94,994 days lost from these accidents. The Frequency Rate was 36.2 or 1.9 higher than 1955 and the Severity Rate was 2572 or 73 higher than the previous year. These increases were brought about by two more fatal accidents during 1956 and an increase of accidents among new men in the mineral industry who had no prior experience in mining.

The fatal accident rate per 1,000 men employed in mining was 0.99 and the fatal accident rate per 1,000 men employed in the oil industry was 0.60. There were 1,282 men employed per fatal accident in mines, mills, quarries, etc. and 15.9 men employed per lost-time accident. One fatal accident occurred for every 1,541,666 tons of ore mined and for each accident 19,241 tons were produced. In the oil industry 1,656 men were employed for each fatality and 8.7 men were employed per injury. There was one fatal accident for every 29,248,327 barrels of oil produced and one lost-time accident for every 155,164 barrels of oil production.

With continued cooperation between operators in the mineral industry and the Bureau of Mines every possible effort to reduce the above figures is being made.

### SUMMARY OF ACCIDENTS—1956

Severity Rate Per One Million Man-Hours 234. 6,328. 1,250. 1,847	2,572 1,000,000 5sure			ne pe ore cave	iding fractures	racture cat head
Frequency Rate Per One Million Man-Hours 26.3 22.1 23.2 13.4 47.4	26,921,400  1,339  the loss of 84,000 days due to 14 fatalities and 7,340 days due to 26 permanent disabilities.  umber of Injuries x 1,000,000  Severity Rate = Total Time Charges in Days x 1,000,000  Severity Rate = Number of Man-Hours of Exposure	956	Cause of Death	Crushed by falling rock Crushed between cars in incline Improper blasting procedure Improper blasting procedure Improper blasting procedure Improper blasting procedure Suffocated when caught in stope ore cave Crushed by falling rock Improper blasting procedure Crushed by falling rock	Electrocution, improper grounding Furnace explosion, burns and fractures	Caught between drill collars, fracture Caught in cat line, pulled into cat head
Number of Days Lost 65,583 13,542 14,726	94,994 ies and 7,340 days due Severity Rate=	FATAL ACCIDENTS—1956	Employed By METAL MINES	Shattuck Denn Mining Company (Pandora) (darado Mining Company (Pandora) (Empire Zine Company (Gilman) (darado Mining Company (Red Mountain) Reynolds Mining Company (Red Mountain) Reynolds Mining Corporation (Gilmax Molydenum Company (Red Mountain) Cilmax Molydenum Company (Donald Young, Union Carbide Nuclear Corp. M. R. Watters	MILLS, SMELTERS, PLANTS nation Corporation of America nerican Smelting & Refining Company (Arkansas Valley Plant)	OIL WELLS illing Company , Jr.
Lost-Time Injuries 104 644 644 146 30 38 38	1,339 days due to 14 fatalit x 1,000,000 urs of Exposure	FATAL A	Employed By METAL M	Shattuck Denn Mining Company Idarado Mining Company (Pandora) Empire Zinc Company (Gilman) Idarado Mining Company (Gilman) Idarado Mining Company (Red Mountain) Reynolds Mining Company (Red Mountain) Reynolds Mining Company (Red Mountain) Idarado Mining Company (Red Mountain) Climax Molybdenum Company Donald Young, Union Carbide Nuclear Con M. R. Watters	MILLS, SMELTERS, PLANTS Vanadium Corporation of America American Smelting & Refining Company (Arkansas Valley Plant)	OIL WELLS H. B. Lynn Drilling Company Alex Beltramo, Jr.
Total   Man-Hours	11/11		Name	Kenneth M. Ackerson Howard W. Fridley Richard Howard Lucero Albert M. Hotter Lester R. Cargile Andre Martel Denver P. Davis Willis E. Linn Richard G. Phillips Eddie Foster	Lyle Arthur Gilbert Jose G. Ľujan	Glenn A. Rayner Charles Edward Louth
Mines, Surface Mines, Underground Quarries, Clay Pits Mills, Smelters, Plaz State & Federal Pro Oil Wells	Totals  This table includes  Frequency Rate = $\frac{\lambda}{\lambda}$		Date	1 4 4 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6	9-30-56 $10-18-56$	1-7-56 12-12-56

### AGENCY CAUSING ACCIDENT

AGENCI CAUSING		
	Te	mporary Injuries
	Fatals	Loss of one day
MINES, SURFACE	ratais	or more
Bars - Bins - Chutes		1
Cars - Motors - Vehicles		
Chemicals		. 1
Drills - Drilling Equipment		. 14
Explosives - Loading, Firing		. 1
Falls - Floor - Ice - Snow		
Falling or Flying Objects		. 1
Flames - Fire - Hot Substances		. 4
Hoists - Hoisting Apparatus		. 1
Ladders - Manways		. 1
Machinery - Tools		
Materials		. 1 17
Metal Objects		. 17
Platforms - Staging - Scaffolds		_ 3
Premature or Delayed Blasts	• • • • • • • • • • • • • • • • • • • •	. 1
Rock - Ore - Ground		. 7
Screens - Tracks		
Tanks - Atmosphere		. 1
Timber - Lumber - Poles	_	. 6
Total		. 104
QUARRIES		
Cars - Motors - Vehicles		. 1
Chains - Gears - Sprockets		. 1
Polta Conveying Dulleys		. 1
Belts - Conveyors - Pulleys		
Chemicals		. 1
Drills - Drilling Equipment		. 2
Electricity - Elec. Equipment		. 1
Machinery - Tools		. 3
Metal Objects		. 2
Rock - Ore - Ground		
Timber - Lumber - Poles		
Total		. 30
MINES, UNDERGROUND		
Bars - Bins - Chutes		11
Cables - Hose - Ropes		28
Cars - Motors - Vehicles		114
Chains - Gears - Sprockets	-	6
Belts - Conveyors - Pulleys		3
Containers		12
Chemicals	•	1
Drills - Drilling Equipment		23
Dust and Particles		2
Explosives - Loading, Firing		2
Electricity - Elec. Equipment		1
Falls - Floor - Ice - Snow		49
1001 100 Dilow		

### AGENCY CAUSING ACCIDENT—Continued

Flames - Fire - Hot Substances Hoists - Hoisting Apparatus Ladders - Manways Machinery - Tools Materials Metal Objects Platforms - Staging - Scaffolds Premature or Delayed Blasts Rock - Ore - Ground Screens - Tracks Shovels, Power Tanks - Atmosphere Timber - Lumber - Poles Unclassified - Insufficient Data  Totals	. 2 . 5	Temporary Injuries Loss of one day or more  2 2 5 69 4 64 2 5 175 12 1 6 32 3 634 644
MILLS, SMELTERS, PLANTS, ET	C.	
Bars - Bins - Chutes	. 1	3 4 6 8 8 5
Dust and Particles  Electricity - Elec. Equipment  Falls - Floor - Ice - Snow		4 7 16
Flames - Fire - Hot Substances Hoists - Hoisting Apparatus Ladders - Manways Machinery - Tools	-	5 1 2 18
Materials		7 24 1 13
Screens - Tracks Shovels, Power Tanks - Atmosphere Timber - Lumber - Poles Unclassified - Insufficient Data		13 1 1 3 6 1
Totals		144 146

### AGENCY CAUSING ACCIDENT—Continued

Temporary Injuries Loss of one day Fatals or more STATE AND FEDERAL PROJECTS Cables - Hose - Ropes 3 Cars - Motors - Vehicles 3 Drills - Drilling Equipment 1 Falls - Floor - Ice - Snow ..... 3 Machinery - Tools 3 Materials ..... 1 Metal Objects ..... 2 Platforms ..... Rock - Ore - Ground 10 Screens - Tracks 1 Tanks - Atmosphere 5 Timber - Lumber - Poles Total 38 OIL WELLS Bars - Bins - Chutes ..... 3 Cables - Hose - Ropes ..... 16 Cars - Motors - Vehicles 12 Chains - Gears - Sprockets 12 Belts - Conveyors - Pulleys ..... 1 Containers ..... 5 Chemicals ..... 2 Derricks - Headframes ..... 1 Drills - Drilling Equipment 81 Dust and Particles 2 Explosives - Transportation ..... Explosives - Loading, Firing ..... 1 3 Electricity - Elec. Equipment ..... Falls - Floor - Ice - Snow ..... 46 Flames - Fire - Hot Substances ...... 27 Ladders - Manways ..... 1 Machinery - Tools ..... 34 Metal Objects 85 Platforms - Staging - Scaffolds ...... 3 Timber - Lumber - Poles ..... 2 Tongs ..... 34 Unclassified - Insufficient Data ...... 2 Totals ..... 2 375 377

### TYPE, NATURE AND SITE OF INJURY

MINES, SURFACE TYPE OF INJURY Burns - Shock Caught in or between Fall on same level Fall on different level Handling Inhalation - Suffocation Striking against - Struck by Slip - Stepping on	8 3 6 27 1 42
Total	-
NATURE OF INJURY Foreign Bodies Cuts - Bruises - Lacerations - Punctures Strains - Sprains - Dislocations Hernia - Respiratory Fractures Burns - Scalds - Shock Nature Unknown	44 28 3 24 14
Total	121
SITE OF INJURY  Eye Head - Face - Neck Trunk Upper Extremities Lower Extremities Insufficient Data	13 25 37 33
Total	121
MINES, UNDERGROUND TYPE OF INJURY Burns - Shock Caught in or between Fall on same level Fall on different level Handling Inhalation - Suffocation 1 Striking against - Struck by 9 Slip - Stepping on Unclassified - Insufficient Data	7 100 23 21 110 10 293 62 8
Totals 10	634 644

### TYPE, NATURE AND SITE OF INJURY-Continued

MINES, UNDERGROUND—Cont.	Fatals	Temporary Ing Loss of one of or more	
NATURE OF INJURY			
Foreign BodiesCuts - Bruises - Lacerations -		39	
Punctures		345	
Strains - Sprains - Dislocations		161	
Herna - Respiratory	. 1	12	
Fractures		100	
Amputation		8	
Burns - Scalds - Shock		10	
Occupational Diseases		10	
Nature Unknown	•	16	
Totals	. 10	701	711
SITE OF INJURY			
Eye		49	
Head - Face - Neck	. 1	53	
Trunk		150	
Upper Extremities		198	
Lower Extremities		219	
General		- 7	
Insufficient Data	•	3	
Totals	. 10	679	689
QUARRIES TYPE OF INJURY			
Burns - Shock		1	
Caught in or between		5	
Handling		10	
Striking against - Struck by		11	
Slip - Stepping on		3	
Total		30	
Total	• • • • • • • • • • • • • • • • • • • •	30	
NATURE OF INJURY			
Foreign Bodies			
Cuts - Bruises - Lacerations - Punctu	res	9	
Strains - Sprains - Dislocations		14	
Fractures		5	
Burns - Scalds - Shock		1	
Total		31	

TYPE, NATURE AND SITE OF INJURY-Continued

TITE, NATORE AND BITE OF	Tem	porary In	inries
	L	oss of one	dav
3	Fatals	or more	
SITE OF INJURY			
Eye		3	
Head - Face - Neck		2	
Trunk		9	
Upper Extremities		9	
Lower Extremities		11	
Total		34	
MILLS, SMELTERS, PLANTS, ET	C.		
TYPE OF INJURY	-		
Burns - Shock	. 2	14	
Caught in or between		20	
Fall on same level	••	4	
Fall on different level		9	
		40	
HandlingInhalation - Suffocation	•	5	
		_	
Striking against - Struck by	•	34	
Slip - Stepping on		18	
m - 4 - 1	_	144	140
Totals	2	144	146
NATURE OF INJURY			
		19	
Foreign Bodies		13	
Cuts - Bruises - Lacerations -		AFZ	
Punctures		47	
Strains - Sprains - Dislocations		47	
Hernia - Respiratory		5	
Fractures		15	
Amputation		- 3	
Burns - Scalds - Shock		17	
Occupational Diseases		3	
Nature Unknown		2	
	-		
Totals	2	152	154
SITE OF INJURY			
		22	
Eye			
Head - Face - Neck		8	
Trunk		38	
Upper Extremities		32	
Lower Extremities		48	
General	1	3	
m ( )	-	151	152
Totals	2	151	153

### TYPE, NATURE AND SITE OF INJURY—Continued

T Fatals	emporary Injuries Loss of one day or more
STATE AND FEDERAL PROJECTS TYPE OF INJURY	or more
Caught in or between Fall on same level Fall on different level Handling Inhalation - Suffocation Striking against - Struck by Slip - Stepping on	1 3 5 5 17 4
Total	39
NATURE OF INJURY	
Foreign Bodies Cuts - Bruises - Lacerations - Punctiures Strains - Sprains - Dislocations Fractures	7
Total	45
SITE OF INJURY	
Head - Face - Neck Trunk Upper Extremities Lower Extremities General	11 5 14
Total	41
OIL WELLS TYPE OF INJURY  Burns - Shock	37 75 10 21 35 2 153 39 3
Totals 2	375 377

### TYPE, NATURE AND SITE OF INJURY-Continued

NATURE OF INJURY Foreign Bodies	1	Temporary Inj Loss of one d or more  7  163 60 2 103 8	
Burns - Scalds - Shock Nature Unknown Totals		$\frac{31}{17}$ $\frac{31}{391}$	393
SITE OF INJURY  Eye Head - Face - Neck Trunk Upper Extremities Lower Extremities General Insufficient Data	1	13 52 70 134 122	
Totals	2	394	396

### MEN EMPLOYED—1956

The number of men employed in 1956 by the mineral industry again showed an increase over previous years as indicated by the following tables.

		nes Men		Plants, elters Men	Clay	rries, Pits Men		cers Men	Pro- jects Men	Oil Wells Men
District 1	126	574	48	621	34	203	4	7	290	1850
District 2	24	264	4	87	36	250	1	5	270	287
District 3	90	2468	20	1520	15	81	3	12	280	850
District 4	354	2624	24	2284	1	3	2	3	226	325
TOTALS	594	5930	96	4512	86	537	10	$\frac{}{27}$	1066	3312

### TOTAL MEN EMPLOYED

Underg	round Surface	Oil Well	s Totals
District 1 39	9 1296	1850	3345
District 2 21	8 658	287	1163
District 3 186	3 2498	850	5211
District 4 190	1 3239	325	5465
TOTALS 438	7691	3312	15,384

### INSPECTIONS

The number of regular mine inspections during 1956 shows a large increase over 1955. This is due to an increase in the number of properties which were in operation, better access roads into mining areas, and more efficient coverage by our four regular Inspectors and our two Deputies. Every known property was inspected at least once during the year and many were inspected several times, or as required and time permitted. Because of the many and scattered mining and oil well properties it is necessary for the inspectors to concentrate their efforts where they are most needed.

### 1956 INSPECTIONS

### MADE BY

			District 3	District 4	
1956	District 1 Blake	District 2 Theobald	Doyle & Keating	Ray & Pakka	Total
January	41	0	23	49	113
February	15	15	18	33	81
March	19	11	18	41	89
April	17	0	39	40	96
May	14	32	21	51	118
June	38	8	28	26	100
July	28	6	28	34	96
August	32	7	35	38	112
September	16	4	13	23	56
October	26	0	31	51	108
November	19	2	33	38	92
December	17	4	26	23	70
					1101
Totals	282	89	313	447	1131

Mines	Quarries & Clay Mines		Placers	Projects	Oil Wells	Total
District 1130	28	42	1	15	66	282
District 2 37	24	10	1	2	15	89
District 3143	21	40	1	12	96	313
District 4366	0	32	0	14	35	447
Totals676	$\frac{-}{73}$	124	3	$\frac{}{43}$	212	1131

### INFORMATION REPORTS

Information Reports were made on practically all property which was actively engaged in producing, developing and prospecting in the State during 1956. Many supplemental Information Reports were made on special investigations. The format of these reports was changed during the year and is now so composed that identical information is given for all properties. This, we find, places the desired information in our public files and gives the general public a more comprehensive picture of mining activities in the State.

### 1956 INFORMATION REPORTS

### MADE BY

	District 1	District 2	District 3 Doyle &	District 4 Ray &	
1956	Blake	Theobald	Keating	Pakka	Total
January	23	0	11	8	42
February	0	0	6	18	24
March	1	1	6	12	20
April	14	0	9	18	41
May	22	0	7	38	67
June	12	5	9	17	43
July	16	32	20	10	78
August	10	12	18	36	76
September	12	3	11	25	51
October	7	0	7	43	57
November	1	11	7	18	37
December	39	6	2	132	179
m					
Totals	157	70	113	375	715

	Quarries &					
Mines	Clay Mines	Smelter	s Placers	Projects	Oil Well	s Total
District 1 77	19	20	3	5	33	157
District 2 30	33	4	1	2	0	70
District 3 59	11	16	1	9	18	113
District 4336	1	11	0	18	9	375
	_		_		_	
Totals502	64	51	5	34	60	715

### TOTAL INSPECTIONS, PARTIAL INSPECTIONS AND INFORMATION DATA

District 1	District 2	District 3	District 4	Total
439	159	426	822	1846

# LIST OF OPERATING MINES IN VARIOUS COUNTIES IN COLORADO—1956 OPERATING MINES IN BOULDER COUNTY

Product	Tungsten Development Development	Cold, Silver, Lead, Uranium Tungsten Tungsten	Gold Silver, Lead Nickel, Cobalt, Copper Tungsten	Tungsten Fluorspar Tungsten Uranium. Vanadium	Tungsten, Gold, Silver, Copper Tungsten		Tungsten Tungsten Development Silver, Lead Tungsten Tungsten	Silver, Lead	Uranium, Vanadium Silver, Lead Development	Lead, Oranium, Co- balt Uranium De- velopment Gold, Silver, Lead Uranium, Vanadium	Fluorspar Gold, Silver, Copper Development Gold, Silver, Copper Development Silver, Lead, Zinc Development Gold, Silver, Lead Gold, Silver, Lead
COUNTY P O Address	Box 461, Boulder 863 S. Dudley, Lakewood 303 Ash Ave., Boulder 7130 W. Colfax, Lakewood	box 22s, bounder 1406 Pearl St., Boulder Box 7, Nederland Box 7. Nederland	Box 589, Boulder c/o Alcoa, 1501 Alcoa Bldg., Pittsburgh, Pa.	Box 16, Lawson Box 431, Boulder 946 Portland St., Boulder First Nat'l Bank Bldg., Den-	Box 144, WardBox 336, Nederland	Jamestown 701 Maxwell St., Boulder 701 Crestline Drive, Boulder 2020 Niagara St., Denver 7 Sugarloaf Star Route, Boulder Nederland	Box 2, Nederland, Boulder	na Star Route, Boulder	, Colorado	Izaz N. Nevada St., Colorado Springs Bonanza Route, Villa Grove . Box 283, Salida	400 S. State St., Chicago 5, III. Buena Vista Box 294, Buena Vista W. Grand Ave., Salida Box 86, Buena Vista Box 86, Buena Vista Buena Vista Buena Vista Buena Vista Buena Vista
OPERATING MINES IN BOULDER COUNTY	rp. Corp.	Chemical & Dye Corp.  Nederland Mines, Inc. 1406 Cold Spring Tungsten, Inc. Box	o., Inc.		ated	C. H. Clark & H. F. Busley Jam Scruggs & Wilson 510 Smith, Rugg & Hennings 701 Frontier Mining Co. 2020 Prime, Hetzer & Peterson Bros. Sug Johnson Bros. & Prime Ned	Langley & Menger Box Cowdry & Smith 117 Cowdry & Smith 117 Mountain States Uranium Co. 734 Traen & Nelson Mining Co. Box Bishop & McDermott Trungsten Mining Co. Inc. 420	ing & Milling Co.	Gilbert Longpre Buena Vista G. A. Musgrove Salida St. George Stiner & Dean Hogg Springs Company of the Company	Josephine Lode & Development Co.1233 Ole Olsen Scott Lackland Bon Continental Mineral Resources.	larvey
OPERATI	y Boulder Falls Jamestown Sugar Loaf Jamestown Jamestown	Caribou Nederland Colo		noxuı		Jamestown C. F Nederland Scri Nederland Smi Eldora Fro Sugarloaf Fro Nederland Joh	u	OPER/	Dist.	Bonanza Ole Taylor Mountain . Sco	4
	April Food Frida Black Hope No. 1	Caribou		Dozer Emmett Eureka		Jimtown Mining Co. Lake Long Shot Mountain Goat Pennsylvania	Piddler Rambler Red Spruce Tip Top Town Lot	White Raven	Be-True Dumpite Gold Bug	Josephine Lode  K. O. (Burlington) Lilly Morean Ranch	Nellie B Pink Lady Shirley No. 3 Silver Kling Stonewall Sunnyside Tilden Tom Collins

# OPERATING MINES IN CLEAR CREEK COUNTY

	Tourist Uranium, Gold,	Uranium, Gold,	Gold, Silver, Lead Silver, Lead Uranium, Gold,	Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead Gold, Silver, Lead	पूर्वित व	Gold, Silver, Lead —Silver, Lead, —Silver, Lead, Copper —Uranium —Gold, Silver, Lead —Gold, Silver, Zinc —Gold, Lead, Zinc —Read, Lead, Zinc —Rare Earth, Uranium,	Gold, Silver, Lead 2 Silver, Lead, Zinc 		Tourist Gold, Silver, Lead, Copper	Development Tourist Gold, Lead, Copper Silver, Lead Gold, Silver, Lead Lonc Zinc Gold, Silver, Lead	Gold, Silver, Lead Gold, Silver, Lead Uranium Gold, Silver, Lead Silver, Lead, Zinc,	Molybdenum 2 Silver, Lead, Zinc
THERETS COOM I	Box 781, Idaho Springs 442 S. Xavier St., Denver 19.	Box 172, Central City	Idaho Springs Box 201, Idaho Springs Box 71, Idaho Springs	Box 695, Idaho Springs 7900 W. Colfax, Lakewood Idaho Springs	1009 Concord Bldg., Oklahoma City, Okla. Idaho Springs Golden Box 824, Idaho Springs	Box 292, Idaho Springs ————————————————————————————————————	Box 283, Idaho Springs 501 Kittredge Bldg., Denver 2 Box 16, Lawson	Idaho Springs	7021 Utica St., Westminster . 7900 W. Colfax, Lakewood	Lawson  Bax 6, Idaho Springs 7900 W. Colfax, Lakewood Mile High Center, Denver 2, 4920 Zuni St., Denver 11. 118 E, 10th Ave., Denver 3. Central City	Box 174, Empire 7900 W. Colfax, Lakewood 792, Lawson Box 282, Idaho Springs Silver Plume	Empire 501 Kittredge Bldg., Denver ?
IN CLEAN C	Ray E. Barber B. R. Stauss & Associates	H. Exploration CoB	Bald Eagle Mining Co. Bald Bell Mines Co. Acme Novelty Co.	Princess of India Mining CoBi Universal Oil & Uranium Co79 Komo MinesId	Jenkins Supply & Drilling Co10  LeRoy Giles & Co	r. Age Minlng Co Lear iny LIS Corp.	Mines Co. Valley Uranium Co. ds Minerals Corp.		Lyle B. McNulty Universal Oil & Uranium Co79	ng Co.  & Uranium Corp.  Mining Co., Inc.  diling Co.  Gold Corp.	Empire Ridge Gold Corp.  Universal Oil & Uranium Corp. 73  St. Louis Lode Mines  C. E. Fetterhoff & R. M. Shatto.B  Andrew Riebel	Molybdenum Corp. of AmericaE Lisbon Valley Uranium Co56
DAILLA	Spanish Bar Ray E. Spanish Bar R. Star	Virginia CanyonH. & I	Virginia Canyon Bald I Silver Plume Blue I Virginia Canyon Acme	Lawson Prince Lawson Univer Idaho Springs Komo	Spring Gulch — Jenkir  Ute Creek — LeRoy Freeland Gulch Donald Idaho Springs — Colora Virginia Canyon Forge	Gilson Gulch — Franklin Silven Idaho Springs — E. A. & Frank Gilson Gulch — G. B. L. Compa Urirginia Canyon Mike Tancher Emkerter Miner Empire — Hidden Treasul Empire — Hidden Treasul Virginia Canyon—Dr. Fred Metz	Idaho Springs Komo Silver Plume Lisbon Lawson Reynol	_	Idaho SpringsLyle 1 Spring GulchUniver	Red Elephant Mtn.McCrea Mines Lidaho Springs Lone Star Min Lawson Denver Nabob Lidaho Springs New Century R Empire Empire Empire Ridge Virginia Canyon _Garrick & Alli	Empire Empire Univer Urrginia Canyon St. Lo Urrginia Canyon C. E. Lo Silver Plume Andre	Empire Molybo
	Anon Lincoln	Ashland	Bald Eagle Blue Bell Calvin	Columbian Chief Comstock Cosmopolitan	Crazy Girl  Dixie Donaldson  Edgar Forge Hill	Franklin Freeland Extension Gem Good Luck Grizzly Hidden Treasure	Idaho Bride Illinois Jo Reynolds Johnny Bull	Keast Tunnel (Donaldson No. 0)	Kitty Clyde	Last Chance 6	Payne Tunnel Red Elephant St. Louis Lode Senator Silver Cloud	Urad Mine & Mill Zero

### OPERATING MINES IN CONEJOS COUNTY

Name of Mine Mammouth	Location Property Phatoro P.O. Address Platoro Probert W. Hume Property Pro
Navajo Lode Tomboy	OPERATING MINES IN CUSTER COUNTY Westcliffe John Banks Westcliffe Copper District Charles & Lyman Akin Wetmore Gold
Doty	OPERATING MINES IN DELTA COUNTY  Delta Atlas Mining & Mfg. Co. 414 Main St., Delta Sulphur  OPERATING MINES IN DOLORES COUNTY
Blaine TunnelEagle Tunnel	Rico Rico B. J. Lane Box 578, Wilcox, Arizona Gold, Silver, Lead.
Mountain Springs	Rico Rico Argentine Mining Co. Rico Silver, Lead, Zinc, Iron
St. Louis Claim St. Louis Tunnel	Rico Jones Brothers Mining Co. Rico Gold Zinc Silver, Lead, Zinc
Eagle	
Vail Pass	Vail Pass Basic Exploration Co
Avery	OPERATING MINES IN EL PASO COUNTY  LytelCliff & Creek Uranium Co447 Independence Bidg., ColoUranium, Vanadium rado SpringsUranium, Vanadium
Copper Queen Good Hope Iron Mountain Snooper-Dickson Ore Body.	Coaldale Carson Mining & Development Co.123 E. Bijou St., Colorado Gold, Silver, Copper Texas Creek Wichita Oil & Uranium Corp. 1444 S. 9th St., Canon City Uranium, Vanadium Corp. Iron Mountain Florence Aggregate Co. Florence And Marzocco Construction Co. Box 1298, Colorado Springs Uranium, Vanadium
Oil Shale Mine	OPERATING MINES IN GARFIELD COUNTY Rifle

### OPERATING MINES IN GILPIN COUNTY

Tourist Uranium, Gold, Silver Uranium, Vanadium, Lead, Zinc Zinc Zinc Zinc Tourist Gold, Silver, Zinc Gold, Silver, Copper Gold, Silver, Copper Gold, Silver, Copper Gold, Silver, Lead, Zinc, Copper Cold, Silver, Lead, Zinc, Copper Ver, Lead, Zinc Uranium, Vanadium Lead, Zinc Tourist	Gold, Silver, Lead, Copper Silver, Copper Tourist Gold, Silver, Lead, Silver, Lead, Zinc Gold, Silver, Lead, Zinc Gold, Silver, Lead, Copper Copper Velopment)
Black Hawk  Box 158, Idaho Springs  Central City  Central City 206 Welton St., Denver 5 206 Welton St., Denver 11 3200 S. Clayton St., Denver 11 11 therstate Trust Bidg., Denver 5 Central City  Central City  Ner 2 Central City  Central City  Box 571, Loveland  Central City  Box 571, Loveland  Central City  Box 571, Soveland  Central City  Box 571, Soveland  Central City  Box 571, Soveland  Central City  Central City  Box 571, Soveland  Central City  Central City  Central City  Central City  Box 571, Soveland  Central City  Cent	Black Hawk Black Hawk Black Hawk 1712 S. Broadway, Denver 10 Central City 9660 W. 36th St., Denver 5 — 609 Equitable Bldg., Denver 2 Black Hawk
Black Hawk Central City Central City Central City Central City Central City Central City United Mining & Leasing Co. Central City Queen Ranch AreaCherokee Uranium Mining Co. Central City	Guich Spring Day Mining Co. B. Silver Lake Dist. Dowell G. Blake Black Hawk Mike McNulty Black Hawk Consolidated Gold Uranium Co. 17 Central City Central City Uranium Corp. Colden Shaft Mining & Miling Co. Oueen Ranch Area Cherokee Uranium Mining Corp. 60 Queen Ranch Area Cherokee Uranium Mining Corp. 60 Apex Mining, Inc. Black Apex Mining, Inc. Black Mining Corp.
Black Hawk Central City Central City Chase Gulch Chase Gulch Black Hawk er Central City Black Hawk Central City Nevadaville Nevadaville Nevadaville Slack Hawk al Central City Lave Gulch Lave Tolland Tolland Lave Lave	
Bobtail Tunnel Buckly Shaft Carroll Cherokee  Cliff Diamond Lil Tunnel Elk Valley Enterprise Gerty, Hayes & Wheeler Gold Ridge Gonella Claim La Crosse Lamberson & Warren Larson Little Colonel Lone Star Liost Gold Flied Piper Flied Piper Priscilla, Sunshine, et al Sheeping Glant Sheping Glant	Three B's Group Toll Gate Gold Mine Treasure Key Tunnel (Williams) Two Sisters Wegotem (Gold Chief) Widow Woman

### OPERATING MINES IN GUNNISON COUNTY

Location  Operator  Tin Cup  Tin Cup  Callahan Zinc-Lead Co.  Crested Butte  Callahan Zinc-Lead Co.  Crested Butte  Callahan Zinc-Lead Co.  Co.  Crested Butte  Co.  Co.  Crested Butte  Cold Creek  Cold Creek  Redwell Basin  Redwell Basin Mining Ventures.  Crested Butte  Crested Butte  Crested Butte  Marshall Pass  Vulcan Silver Lead Corp.  Crested Butte  Colorado Exploration & Engineer.  Ebyre Creek  Colorado Exploration Co.  Marshall Pass  Vulcan Silver Lead Corp.  Crested Butte  Colorado Exploration Co.  Marshall Pass  Operator  Colorado Sxploration Co.  Colorado Exploration Co.  C	Product		on Silver, Lead, Copper	Junction Gold, Silver, Lead,	Ď	r]t	Silver, Lead	Texas	onUranium, Vanadium		Zinc, Copper  Zinc, Copper  Gold, Silver, Lead  Silver, Lead  Silver, Lead  Beryllium, Tantalum,  Hica, Columbium,		and Junction Gold, Silver, Lead Gold, Silver, Lead ty	Y	ourgUranium, Vanadium	salt Lake	Fluorspar Gold, Silver, Lead
	N GUININGON COUNT		1	1 1	rank	& Engineer	S. Engineer - 1123 Colorado Av. Junction	rp. Meadows Bldg., Dallas, Texas. Box 326, Crested Butte	Corp. Box 144, Gunnison & Refining	09		N HINSDALE COUNTY	neering Corp. 308 Main St., Gra Lake City o. Box 31, Lake Cit	N HUERFANO COUNT	Box 48, Walsenburg	IN JACKSON COUNTY orp 3041 Mark Ave., 8	
	OFERALING MINES I	e	rigan Headlight Uranium	:	Harry Downing & F Hodgson	8 8 9 9 9 9 9 9 9				Co.		OPERATING MINES I	Gulch Intermountain Engli Mendenhall & Pray Gold Coin Mining C	OPERATING MINES I	Phillip R. Williams		reek
Name of Mi Akron Amazon Anaconda Augusta Baxter Brown Derby Carter & Ray Carter & Ray Daisy  Gold Lynx Hawkeye Indian Creek Keystone Siar Willow Creek Willow Creek Cold Quartz Pelican Sohn C. Pitki	Locatic	White Pin Tin Cup	Iola	Crested Bu				Gold Creel	Marshall F		Springfield Mill Creek Star Italian Mo	0	Gold Quartz Deadman Pelican Lake City Rodney Portal Lake City	0	John C. PitkinGardner	Northgate	Wheeler C

## OPERATING MINES IN JEFFERSON COUNTY

Of Editing Milled IN SELECTION COOK	Golden Yellow Queen Uranium Co. Critchet Thurman Mineral Development	Balston Creek	Golden Verne Hawkins Co. Cressman Gulch Denver-Golden Oil & Uranium Co.	Denver 2 Idledale Grapevine Mining Corp. Morrison Ralston Creek Denver-Golden Oil & Uranium Co.760 Denver Club Bldg.,	Leyden Traen & Nelson Mining Co. Box 283, Central City  Addit) Soda Lake Uranium Enterprise, Inc. 2679 Arabahoe, Boulder  Addit) Coal Creek Canyon Joseph W. Walsh 4925 Montview Blvd.,	Denver 7 Ralston Creek Denver-Golden Oil & Uranium Co.760 Denver Club Bldg.,	Denver 2 Denver 2 Uranium CorpSoda Lake Four Corners Uranium Corp633 Guaranty Bank Bldg., Uranium Denver 2 Denver 2 Uranium	Golden Gate Golden Drilling Co. 2301 East St., Golden	T-3 R-71 Golden Verne Hawkins T-3 R-71 Golden Spricke Raiston Creek Derver-Golden Oil & Uranium Co.	Sedalia
	Ascension Black Knight	Bob & Lee	Buckman Foot Hills	Grapevine Ladwig	Leyden Mann No. 1 Mena (South Adit)	Minnesota	Morrison	Nare Hole No. 1	Pearce Mine School District T-3 F Schwartzwalder	Seven Devils

### OPERATING MINES IN LAKE COUNTY

1	Bi-MetallicLong and Derry HillLouis KostelicLouis Kostelic	Climax Mines Climax Climax Molybdenum Co. Climax Molybdenum Co. Hayden Eryer Hill Cadwell Mining Co. 2450 Kendall St., Denver 15. Gold, Silver, Lead,	Helena	Ibex No. 4Johnny Hill Webster Lease 400 E. 4th St., LeadvilleGold, Silver, Lead,	Irene ShaftJohnny Hill	Julia Fisk Leadville Gulch Resurrection Mining Co. Box 936, Leadville Gold, Silver, Lead	Leadville Drainage Tunnel Leadville Robert L. Jones Box 921, Leadville Re-conditioning	Gulch Gulch Lead, Inc. 400 E. 4th St., Leadville Gold, Silver, Lead,	Resurrection No. 2 - Big Evans Gulch Robert L. Jones 131 W. 9th St., Leadville Gold, Silver, Lead,	Two Bit Tunnel M. R. N. Mining Co. 232 E. 9th St., Leadville Development Yak Tunnel California Gulch Kaiser Lease 106 Harrison Ave., Leadville Gold, Silver, Lead,
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## OPERATING MINES IN LA PLATA COUNTY

m Co. 366 S. 5th East, Salt Lake City, Utah Southistic Southistic Gold, Silver Southistic Grocery, Delta Farmington, New Mexico Gold, Silver Southistic Grocery, Delta Forter Barrian, Vanadium Coute Harman Dalla, Silverlon Gold, Silver, Lead Couterman Dalla, Silverlon Denver 2 IN LARIMER COUNTY	231 S. Grant St., Fort Collins Tourist Bay 176, Estes Park Co. 516 Majestic Bldg., Denver 2 Uranium, Beryllium Greeley Bellview Clos 823½ 16th St., Greeley MESA COUNTY	A. C. Rinderle Lorenton Drive, Grand Uranium, Vanadium Route 4, Grand Junction Uranium, Vanadium Edward 4, Grand Junction Uranium, Vanadium Edward Knizley Foots 294 Road, Grand Junction Uranium, Vanadium Route 1, Grand Junction Uranium, Vanadium Holer Route 1, Grand Junction Uranium, Vanadium Holer Route 5, Grand Junction Uranium, Vanadium Junction Uranium, Vanadium Route 1, Grand Junction Uranium, Vanadium Kirk Basin Uranium Gorp. Gord Route 5, Grand Junction Uranium, Vanadium Route 1, Grand Junction Uranium, Vanadium Holer Route 6, Grand Junction Uranium, Vanadium Ace Turner 2001 Sherman Drive, Grand Uranium, Vanadium Junction Edwards Sherman Drive, Grand Uranium, Vanadium Greenhill & Prothro 2001 Sherman Drive, Grand Junction Uranium, Vanadium Uranium, Vanadium Holer Route 1, Grand Junction Uranium, Vanadium Uranium, Vanadium Holer Route 1, Grand Junction Uranium, Vanadium Urani
Name of Mine Location Operator  Aller Tunnel La Plata Canyon Copper Age Uranium Co.  Brawner Tunnel La Plata Canyon La Plata Gold Mines, Inc. Good Hope Lighter Creek Ben Brito Knoll Muldoon Hope La Plata Canyon H. E. Knudson Nevada & Good Hope Lightner Creek Acme Uranium Mines Institution  OPERATING MINES IN LARIM	Black Hawk Red Feather Cherokee Mines Hide Above Lode Masonville Phil Mar Oil Co. Hide Above Lode Masonville Storm Mountain Mining Co. Karen Nos. 1 to 10 Idlewild Area Sol Schlagel & Assoc. Revis Bellview Revis Uranium Queen District OPERATING MINES IN MESA	Arrowhead No. 2  Arrowhead No. 18  Arrowhead No. 18  Arrowhead No. 19  Arrowhead Incline No. 4  Calamity Mesa  Arrowhead Incline No. 4  Calamity Mesa  Arrowhead Incline No. 12  Calamity Mesa  Berrowhead Incline No. 13  Arrowhead Incline No. 19  Calamity Mesa  Arrowhead Incline No. 19  Calamity Mesa  Arrowhead Incline No. 20  Calamity Mesa  Arrowhead Incline No. 21  Calamity Mesa  Arrowhead Incline No. 22  Calamity Mesa  Arrowhead Incline No. 23  Calamity Mesa  Austin  Belmont No. 17  Belwort Mesa  Arrowhead Incline No. 22  Calamity Mesa  Austin  Belmont No. 17  Beaver Mesa  Arrowhead Incline No. 22  Calamity Mesa  Arrowhead Incline No. 23  Calamity Mesa  Arrowhead Incline No. 24  Calamity Mesa  Arrowhead Incline No. 25  Calamity Mesa  Arrowhead Incline No. 25  Calamity Mesa  Blue Ribbon Nos. 1 & 2  Calamity Mesa  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 26  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 27  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 27  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 27  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 28  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 28  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 28  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 38  Arrowhead Incline No. 38  Calamity Mesa  Dorr Philips  Arrowhead Incline No. 48  Arrowhead Incline No. 58  Arrowhead Incline No. 50  Arrowhead

Junction  Junction  Junction  Junction  Uranium, Vanadium  Box 1649, Grand Junction  Grand Junction  Box 1698, Grand Junction  Grand Junction  Grand Junction  Box 1421, Grand Junction  J	610 Rood Ave., Grand Junction Uranium, Vanadium Grand Junction Uranium, Vanadium Grand Junction Uranium, Vanadium 923 N. 7th St., Grand Junction Uranium, Vanadium Route 4, Grand Junction Uranium, Vanadium Bax 136, Grand Junction Uranium, Vanadium 834 S. 7th St., Grand Junction Uranium, Vanadium 2791 S., Highway 50, Grand Uranium, Vanadium Junction Uranium, Vanadium Junction Uranium, Vanadium Junction Uranium, Vanadium	ive, Grand Uranlum, and Junction Uranlum, Uranlum, Uranlum, Uranlum, Uranlum, It Blugs, Salt Iranlum, the Blugs, Salt Ira	Road, Grand Jetn., Grand Junction	Rifle Uranium, Grand Junction Uranium, rado Ave., Grand Uranium, n'ado Ave., Grand	Junction  Route 4, Grand Junction  Foute 1, Grand Junction  Box 1336, c/o American Ledue  Tranium Co., Grand Junction  Jranium, Vanadium  Jranium, Vanadium  Jranium, Vanadium  Jranium, Vanadium  Jranium, Vanadium  Jranium, Vanadium  Jranium, Vanadium
Corp.	m Corp.		Gateway Gateway 504 - 284 Box 1834, 0	Box 185, Rifle Uravan Route 5, Grand Rifle 1217 Colorado 1217 Colorado	Junction  Route 4, G  Route 1, G  Box 1386, C  DeVar Shum-313 Hill D  Box 1472,
Vernon Lehr  Carl Tucker Yeager & Titus Argo Mining Co. Basver Mesa Mining, Inc. American Leduc Uranium William Holder William Holder Lark Washburn Lark Washburn Three Forks Oil & Uraniu	Cullen Minerals Corp.  C. A. Exploration Co. Silver Pick Uranium Co. H. L. Arbogast A. Marican Leduc Uranium C C. E. & Dwight Poland C. E. & Dwight Poland Beaver Mesa Uranium Inc. Dallas Uranium & Oil Corp.		Utarado Mining Co Jack Montgomery Econard Foster Bugene Bishop Argo Mining Co	William Mease Charles Woodard Ralph D. Hickman Norman Wellman Herbert Foster Ralph Foster & Sons	H. L. Arbogast  Dorr Philips Frank Hodgson Lark Washburn & Dev Way New Verde Mines
Calamity Mesa  Calamity Mesa  Calamity Mesa  Calamity Mesa  Beaver Mesa  Deaver Mesa  Outlaw Mesa  Outlaw Mesa  Calamity Mesa  Calamity Mesa	Blue Mesa Blue Mesa Blue Mesa Blue Mesa Outlaw Nesa Outlaw Mesa Blue Mesa Outlaw Mesa Blue Mesa Mesa Mesa Mesa Mesa	Tenderfoot Mesa Tenderfoot Mesa Tenderfoot Mesa Beaver Mesa Beaver Mesa	"Beaver Mesa Outlaw Mesa Tenderfoot Mesa Beaver Mesa a. Beaver Mesa	Calamity Mesa Beaver Mesa Beaver Mesa Maverick Mesa 2 Outlaw Mesa —Outlaw Mesa	Calamity Mesa Calamity Mesa Calamity Mesa
Calamity Nos. 21 & 27 Calamity No. 27 East Cave Adit No. 1 Century Tunnel Cherokee Cresent Nos. 1 & 2 Crows Nest Crows Nest Depression No. 6 Dixie No. 2 Eclipse No. 2	Elizabeth No. 8 Incline No. 2 Elizabeth No. 9 Elizabeth No. 18 Flat Top Government Nos. 1, 2, 3 Hanson-Negus Henderson Incline Hubbard Tunnel	Karns Incline  King Soloman  Knot I Lease La Sal No. 1 La Sal No. 2	La Salle Extension Nos. 3, 5, 7 Lavada Liberty Bell Lisbon Tunnel Lost Dutchman-Bonanza	Lucky Boy Lumsden No. 1 Lumsden No. 2 Maverick No. 6 Mesa No. 5, Inclines 1 & Mesa No. 8	Mineral Channel Inclines 3 & 5 & 5 & 5 & 5 & 5 & 5 & 5 & 5 & 5 &

# OPERATING MINES IN MESA COUNTY—Con't.

### OPERATING MINES IN MONTROSE COUNTY

Uranium, Vanadium	Silver, Copper Uranium Vanadium Uranium, Vanadium
Box 8, Cripple Creek Rarmington, New Mexico Box 33, Uravan Uravan Naturita Nucla Box 431, Nucla Box 431, Nucla Box 431, Nucla Box 431, Nucla Box 50, Uravan Durango Durango Durango Box 27, Uravan Route 1, Box 186, Montrose Route 4, Grand Junction Box 27, Nucla Box 27, Nucla Box 27, Nucla Route 1, Box 186, Montrose Box 24, Nucla Box 423, Uravan Box 423, Uravan Box 423, Uravan Box 423, Uravan Grand Valley	Box 234, Ridgway  Box 324, Ridgway  Box 922, Moab, Utah  Box 850, Uravan  Box 127, Nucla  Box 137, Nucla  Box 137, Nucla  Box 137, Nucla  Box 103, Nucla  Box 103, Nucla  Box 103, Nucla  Clay, Uravan  City, Utah  Box 494, Uravan  City, Utah  Box 494, Uravan  City, Utah  Box 494, Uravan  Box 494, Uravan  Fruita  Roucla
Barkley & Co.   Rex Uranium Co.   Rex Uranium Co.   Rex Uranium Co.   Rex Uranium Co.   Reand Hutton   Ronald Huttor   Ronal	Cashin Copper Corp.  Elmer Neilson  W. B. Wantt Lark L. Washburn  W. B. Beckman  W. B. Beckman  Philip Klingensmith  E. J. Alora  Martin Templeton  Vanadium Corp. of America  Lloyd Rainwater  Loyd Rainwater  Corp. of America  Iloyd Rainwater  Nanadium Corp. of America  Corp. of America  Iloyd Rainwater  Corp. of America  Iloyd Rainwater  Iloyd Rainwater  Corp. of America  Iloyd Rainwater  Iloyd Allen  Iloyd Allen  Iloyd Allen  Iloyd Allen  Iloyd Allen  Iloydey & I. Alexander  Iloyd America  Iloyd A
Club Mesa Dolores River Martin Mesa Little Gyp Valley Uravan Martin Mesa Martin Mesa Martin Mesa Martin Mesa Uravan Uravan Uravan Uravan Atkinson Mesa S. E. Long Park Monogram Mesa Atkinson Mesa Little Gyp Valley Carpenter Ridge Buf Carpenter Ridge Buf Long Park Atkinson Mesa Little Gyp Valley Carpenter Ridge Buf Little Gyp Valley Carpenter Ridge Buf Little Gyp Valley Carpenter Ridge Buf Carpenter Ridge Buf Little Gyp Valley	Creek Little Gyp Valley Dolores Rim La Sal Creek Long Park Long Park Martin Mesa Bull Canyon Long Park Manongram Rim Bull Canyon
A. E. C. Block No. 6 Adak (Rex) Anta Austin Aztec Badger Badger No. 1 Badger Beta Beta Big Bull Big Mitt Big Mitt Big Mitt Big Mitt Big More Blackburn Buckburn Buckburn Buckkburn Buckkburn Buckkburn Buckkburn Buckkburn Buckkburn Buckkburn Buckkburn Buckkorn No. 1 Brook No. 1 Brook No. 1 Caryert	Chashill Chiff Dweller Cliff Willow Club Group Coloradium Coloradium Coloradium Coloradium Coloradium Coloradium Coloradium Doagy No. 2 Dolores Donald L. Dorothy Jean Dorothy

# OPERATING MINES IN MONTROSE COUNTY—Con't.

		William in the contract	1	Deceluot	
Name of Mine	Location	Operator	F. O. Address	Product	
Firecracker Incline First National Bank	Long Park Center Long Parl	Ben Brito & Henry Trujillo ParkBarnes Bros.	Delta Nucla	Uranium, Vanadium Uranium, Vanadium	
Fourth & Fitth National Banks Fox	Long Park Dolores Rim	Paul Gardner Dan Kelly & Robert Selan	Naturita Route 4, Grand Junction 215 Lands Down, Grand	Uranium, Vanadium Uranium, Vanadium	
Good Hope	Kagle Basin	John Ages	Vincian Nucla	Uranium Vanadium Uranium Vanadium	
2	Bull Canyon	Glen Gardner & E. Wilson	01,		
Grass Roots	Uravan N.W. Long Park	Frank Stocklasa R. C. Bishop	Box 424, Uravan		
Groundhog	Long Park	Brickey & Alexander	Box 423, Uravan	Uranium Vanadium	
Guadalcanal	Long Park	Laverne Kay Robert Williams	Uravan		
Happy Jack	Little Gyp Valley	Forrest Binder	Box 761, Durango	Uranium Vanadium	
Henry Clay	Long Park	John Morrill Vanadium Corp. of America	Durango		
High Ball	Bull Canyon Bull Canyon		Telluride Box 64, Naturita	Uranium Vanadium Uranium Vanadium	
Honeymoon	Central Long		Dow 494 Thomas	Hranium Wanadium	
	Park	R. C. Bishop	Box 13006 Houston Texas		
Horsenair No. 1	- Bull Canyon	Lowell Staats	1		
- 1	1	Goode & Kruse	Box 73, Naturita		
Jo Anne No. 4	Dolores Rim	Clarence J. Holder	Doy 907 Ilrayon	Uranium Vanadium Uranium Vanadium	
Joe	Tittle Cum Vieller	Floor Houst Transium Co	136 S. State St. Salt Lake		
Joker	Infile Gyp valley	Diach Hawk Clanium Co.	City, Utah		
Lark Nos. 1 & 8	Bull Canyon	North Standard Mining Co.	Provo, Utah		
La Salle Shaft	Club Mesa	La Salle Mining Co.	Box 596 Hravan	Uranium, Vanadium Uranium Vanadium	
Last Chance	Wild Steer Canyon		Naturita		
Little Basin	San Miguel Bench	Albert J. Harmon			
Little Dick	Atkinson Mesa	Frank Elder	526,		
Log Cabin	Bull Canyon.	Milton Castor	Box 284, Naturita	Uranium, Vanadium	
Lone Pine	Carpenter Ridge	Delbert Dyer	Box 235. Nucla		
Long Park No. 6	Long Park	Frank Fedel	Box 473, Uravan		
Long Park No. 9	Long Park	H. F. Gardner & Son	rita		
Long Park No. 12	Long Park	E. T. Holdeman	Box 272 Uravan	Uranium, Vanadium Uranium, Vanadium	
Mariorie Ann	Lion Creek	Four Corners Uranium Co.	Box 1749, Grand Junction		
Mary Ann	Monogram Mesa	ì	Box 236, Norwood		
Mill No. 1 Mine	Club Mesa	O'Bryant & Powell	Uravan 1025 S 14th St Montrose	Uranium, Vanadium Hranium Vanadium	
200	Monogram Mesa	Climax Ilranium Co	Grand Junction		
Mineral Joe Incline No. 1		Richards & Richards	Nucla		
Joe Shaft		Climax Uranium Co.		Uranium, Vanadium	
Park No.	Monogram Mesa	Ambassador Oil Co.	3101 Winthrop Ave., Fort		
Mineral Park No. 5	Monogram Mesa	Fred Hawkins	P.O. Box 1697, Grand Junction	Uranium,	
ar	Lion Creek		Box 805, Cortez		
North Star	Dolores Rim	Vanadium Corp. of America	Durango	Uranium, Vanadium Uranium Vanadium	
Ophir	Atkinson Mesa	Сесп Билкег	Mucia		

. Uranium, Vanadium		- Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium - Uranium, Vanadium	rrrr	PPP	Uranium, Vanadium - Uranium, Vanadium	FFFFFF	Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium
Box 301 Naturita  Box 325, Nucla Naturita Box 337, Uravan Box 206, Naturita Uravan Box 337, Uravan Box 327, Uravan Box 327, Uravan	974 Elgin Ave., Salt Lake City, Utah Station 1, Santa Fe, New	Mexico Box 761, Durango Box 452, Salt Lake City, Utah Naturlita Box 1465, Grand Junction	Durango Durango Blanding, Utah Box 74, Nucla	Box 283, Naturita Box 206, Naturita 2595 Pierce St., Denver 14 Uraavan	Box 502, Uravan Box 273, Naturita Box 273, Naturita Naturita Uravan Uravan St. 202, Uravan Uravan		Box 231, Uravan Box 282, Uravan Box 850, Uravan Box 850, Uravan Box 296, Nucla 727 3rd Ave., Grand Junction Durango Cortez
Agrett As G. Reed Ingensmith Ingensmith Uranium Corp.	Beehive Mining Corp97. Uranium Development CoSta	Forrest V. Binder Bo Moab Treasure Uranium Co. Bo Jessie Longwill Na. Na. A. W. Boldt	orp. of America orp. of America ndell Jones	ilkins op Corp.	Dale Sturtevant Na Douglas Cleghorn Bo Ouglas Cleghorn Bo Shattuck Denn Mining Co. Bo Alohn Dade National Managan Clarence Neilson Ur Brothers	Corp. of America finerals Co. erry Surbridge Corp. of America	& Bob Schif  P. Jones  A ster  O. Of America  C. C. A. Nickos  O. of America
Monogram Rim  Monogram Mesa  Bull Canyon  Martin Mesa  Carpenter Flats  Martin Mesa  Martin Mesa  Martin Mesa  Martin Mesa	lidge				sa ench	t fliff!	Atkinson Mesa Ronald Hutton Long Park Carl Mangum 6 Long Park Johnson & Gie Long Park Tom Van Arsda Carpenter Ridge Cog Minerals C Wild Steer Carpon Van addium Corp Carpenter Ridge Chas. G. Fuller Carpenter Ridge Chas. G. Fuller Long Park Long Park Ovanadium Corp MacIntyre Canyon Richard Dillon
Oversight Paradox D Patty No. 5 Incline Pay Day Pay Day Pay Day Peanut Piper Nos. 1 & 3 & Sham Prock No. 3 Princess Production	Radium Cycle	Raven Red Bird Red Pox Red Pox Red Rock No. 5	Red Sox Republican Rimrock No. 2 Rimrock No. 3	Rimrock Blues Nos. 2 Rimrock Blues No. 6 Roc Creek St. Patrick	Sandy Sandy Sandy September Morn Shattuck Denn Shaft South Blackfoot Sphnx Star No. 3 South	Starlight Sun Beam Sunrise No. 3 Sunrise Nos. 4 & 5 Teapot Dome Three Jacks	Townhouse Tramp Nos. 1 & 3 Tramp Nos. 2 Trampulon. Triangulation U. S. Grant Ureka Vaden View Valley View Valley View Vanadium King

# OPERATING MINES IN MONTROSE COUNTY—Con't.

	6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	OPERATING MINES IN OURAY COUNTY	Big Andy Poguepsie Gulch Andy Suytac Ouray Grey Copper Gulch Glen Porter Ouray Ouray Gold, Silver, Lead
	Grand	Long Park R. C. Bunker Box 153, Nucla Box 596, Nucl	Long Park R. C. Bunker Box 153, Nucla Monogram Mesa Clark & Harris Box 596, Nucla Atkinson Mesa Worcester Mines, Inc. 1501 White Ave., Grand Junction Carpenter Flats Hugo W. Johnson & Co. Cripple Creek OPERATING MINES IN OURAY COUNTY
Name of Mine Location Operator P. O. Address Product		Junction Carpenter Flats Hugo W. Johnson & Co Cripple Creek	Carpenter Flats Hugo W. Johnson & Co. Cripple Creek  OPERATING MINES IN OURAY COUNTY

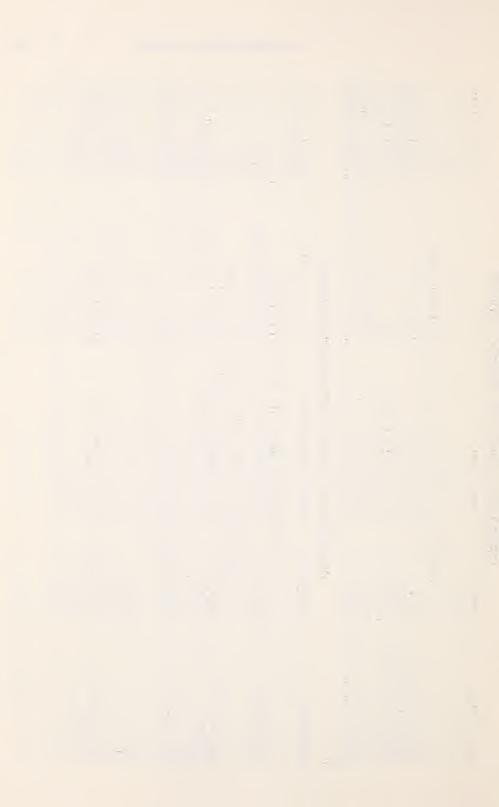
Gold, Silver, Lead Gold, Silver, Lead,	9	Ğ.	Gold, Silver, Lead,	c/o Fellin Bros., Ouray		Box 119, OurayGold, Silver, Lead
Poguepsie Gulch Andy Suytac Ouray Grey Copper GulchGlen Porter Ouray	OurayCamp Bird LimitedOuray	Ironton Park St. Germain Foundation Ouray Ironton Park Mayflower Mining & Petroleum Ouray	Yankee Boy BasinWalter Smith & Edwin Wright - Ouray	Lake Lenore Nel Thompson Co. C/o F/ Red Mountain Rouville Mining Co. Box 3	Ouray Idarado Mining Co.	Bear Mountain Glen Porter & Son
Big Andy Pog Brown Mountain Gre	Camp BirdOur	Edna Greyhound Group Iro	KeystoneYa	Pony ExpressLal	Treasury TunnelOur	Wewissi Bea

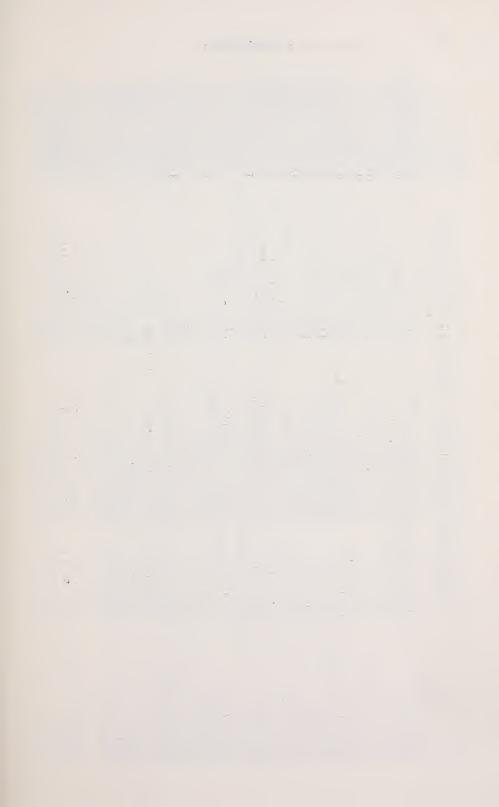
### OPERATING MINES IN PARK COUNTY

Betty	Guffey A. T. & A. Uranium Co. Canon City Gold, Silver, Lead,
Boomer	
Buckskin Joe	Buckskin Gulch Buckskin Joe Mines, Ltd. Alma Silver, Lead, Copper Zinc
Ling	North Star Moun- Lain Cordillera Corp. Fairplay Gold, Silver, Copper,
Parco Queen Mary	nette, Colorado
W. G. Mine	Horseshoe District W. G. Mines Assn. Alma Alma Zinc Gold, Silver, Lead,

### OPERATING MINES IN PITKIN COUNTY

Kris Kringle	Peek-A-I	Peek-A-Boo CreekJames Foster	James	O CreekJames Foster	TTTTT	Aspen			Gold, Silver, Lead	
Smuggler	Aspen		John F	John F. Lewis		Box 150, Aspen	en		Gold, Silver, Lead	
	0	PERAT	ING N	OPERATING MINES IN RIO BLANCO COUNTY	RIO BLAI	исо соп	NTY			
Burrell Nos. 1, 2, 3	Meeker Meeker Meeker Uranium	Peak	McAlest McAlest D. J. D. Ken &	McAlester Fuel Co McAlester Fuel Co D. J. Devercaux Ken & Lincoln Johnson	no	Meeker Meeker Box 373, Meeker Rifle	ker		Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium	
Midnight (South Half)  No Name No. 3 Sleepy Cat Windy Point Nos. 1 & 2	Meeker Meeker Meeker Uranium Peak	Peak .	Ray Hasselbu Moulten Harry H. Har Marcy Explor Louise Smith	Ray Hasselbush & William Moulten Harry H. Harp Marcy Exploration & Mining Co. Louise Smith	am ning Co.	Box 491, Rifle Box 643, Meeker Meeker 4711 Page Blvd., St. Louis, Mo.	e eker vd., St. Lo	uis, Mo.		
Summitville	OPE Summitville	PERAT	ING ]	OPERATING MINE IN RIO GRANDE COUNTY	IO GRAN	IDE COUNTY Box 446, Grand Junction	TTY nd Junctic	uo	Gold, Silver, Lead.	
									Zinc	
		OPEI	RATIN	OPERATING MINE IN ROUTT COUNTY	N ROUTT	COUNTY				
Copper King	McCoy		McFarl	McFarland & Hullinger		Box 238, Tooele, Utah	ele, Utah		Copper	
	0	PERAT	ING N	OPERATING MINES IN SAGUACHE COUNTY	SAGUACE	HE COUNT	ľŸ			
BennettBonanza	Bonanza Bonanza		D. W. S	D. W. Schmidt National Consolidated Corp.	Corp.	Bonanza Route, Villa Rainbow Blvd., Salida	ite, Villa d., Salida	Villa Grove Salida	Silver, Lead, Zinc Gold, Silver, Lead,	
Cliff	Bonanza		D. W. S	W. Schmidt		Bonanza Route,	ite, Villa Grov	Grove	Gold, Silver, Lead,	
D & J Mine (Bonita) — Erie No. 28 Jupiter	Marshall Creek Indian Creek Bonanza	Creek reek	D & J U Vulcan D. W.	D & J Uranium & Exploration Vulcan Silver Lead Co. D. W. Schmidt	loration Co.	Co.4th & Santa Fe, Pueblo Gunnison Bonanza Route, Villa Grove	Fe, Pueblo	Grove	Uranium, Vanadium Uranium, Vanadium Gold, Silver, Lead,	
Los Ochos Navajo	Cochetopa Bonanza	a	Gunnisc D. W.	Gunnison Mining Co. D. W. Schmidt		Box 539, Gunnison Bonanza Route, Villa		Grove	Zinc Uranium, Vanadium Gold, Silver, Lead,	
Queen City	Bonanza	1	Queen (	Queen City Mining Co.		1120 Kearney St., Denver	st., Den	ver 20	Gold, Silver, Lead,	
Rawley Nos. 1 & 2 Rawley No. 12	Bonanza	Gulch	Willian Superio	William Costello Superior Mines Corp.		Bonanza Route, Box 127, Salida		Villa Grove	Silver, Lead, Zinc Gold, Silver, Lead,	
Uncompahgre No. 1	Bonanza	Pass	Uncomp D. W. S	Uncompangre Exploration D. W. Schmidt	ation Co	308 Palmer St., Bonanza Route,		Salida Villa Grove	Zinc, Copper Uranium, Vanadium Gold, Silver, Lead,	
Whale	Bonanza		W. O.	Fortenberry		1122 Natl. Bank bock, Texas		Bldg., Lub-	Zinc Gold, Silver, Lead,	
Wheel of Fortune	Bonanza	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	D. W.	Schmidt		Bonanza Route,		Villa Grove.	Zinc Gold, Silver, Lead,	





### OPERATING MINES IN SAN MIGUEL COUNTY-Con't.

	Product	Uranium, Vanadium Litanium, Vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium	Bog Iron	Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium IIranium, Vanadium	Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium	Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium	Uranium, vanadium Uranium, Vanadium Uranium, Vanadium Uranium, Vanadium	Uranium, Vanadium Development Uranium, Vanadium Uranium, Vanadium Gold, Silver, Lead, Zinc, Copper	Uranium, Vanadium Development Uranium, Vanadium	Uranium, Vanadium Uranium, Vanadium	Gold, Silver, Lead,	Uranium, Vanadium Uranium, Vanadium
EL COULT 1 COIL 6:	P. O. Address		2001 Lynch St., East St. Louis, Illinois	Box 992, Moab, Utah Box 204, Mancos Dove Creek	Box 558, Dolores Box 127, Moab, Utah Redvale	Box 402, Dove Creek Box 522, Nucla Dove Creek	227 S. 5th St., Montrose Dove Creek Egnar 501 Kittredge Bldg., Denver	Box 117, Nucla Redvale Box 165, Dove Creek Egnar Telluride	Paradox Placerville Moab, Utah	Redvale Telluride	Redvale 134 E. Colorado Ave., Telluride	Box 1226, Moab, Utah Box 547, Nucla 583 N. 23rd St., Grand Junction
OF ENALING MINES IN SMIN MISSEL COOKER	Operator	n Bishop Canyon Uranium Co. nd Ouray Uranium Co. nd Oddie Cross nd William Barlow	C. K. Robinson & Co.	George Vranish Small Mines Co. Ortmayer Mining Co. Foot Williams & Assoc		10 1 1	Tom Welbourne & Assoc. Ortmayer Mining Co. W. J. Burwell	Edward J. Johannsen William Hardin & Assoc. Holder, Auringer & Ream Foster Brothers Idarado Mining Co.	Clotworthy & Waggner Mount Wilson Mining Co. Nankee Cannek Mines	Douglas Sears Waverly Mining Co.		Bonanza Oil & Uranium Co. Jerry Jones ey E. E. Lewis & Associates
OFFINAL	Location	Bishop Canyon Horseshoe Bend Horseshoe Bend Horseshoe Bend Radium Camp	Old Ophir	Wedding Bell Spud Patch Slick Rock		Bishop Canyon Wedding Bell Bishop Canyon		Spud Patch Big Gyp Valley Slick Rock Slick Rock Pandora	Slick Rock Ophir Upper Gyp	Upper Gyp Valley Bear Creek	Upper Gyp Valley Tomboy Road	Gypsum Valley
	Name of Mine	Hogback Claim Horseshoe No. 1 Horseshoe No. 4 Horseshoe No. 5 Horseshoe No. 5	Iron Springs Placer	Jack Knife Jupiter King No. 2 King No. 4	King No. 6 Lone Peak Longridge	Lucky Strike Main Street Marie	Mary Jane May No. 2 Middle Hawk Modena	Moqua Jug Morning Glory Mucha Grande Ocumpaugh	Parrot Pike County Mine Pitch Fork	Polaris Pond	Preston Moore	Prospectors Fortune Rainy Day

	Gold, Silver, Lead,	Uranium, Vanadium
Blue Jay Courts, Placerville Uranium, Vanadium Begnar Uranium, Vanadium Box 558, Dolores Uranium, Vanadium 6 Maiden Lane, New York Gold, Silver, Lead, City Zinc, Copper	Telluride	Moab, Utah Durango Dove Greek Cotrez Box 318, Dove Creek Box 13, Nucla Box 243, Uravan Dove Greek Cortez Dove Creek
Leopard Creek R. E. Rutherford Slick Rock Roy Skidmoore Mining Co. Matterhorn Cataract Mining Corp.	Mount Wilson Mining Co.	Leopard Creek Hayes Investment Corp.  Bishop Canyon Vanadium Corp. of America— Slick Rock Max Barkley Slick Rock J. W. McCormick Gypsum Valley Tim Wade & Assoc. Horseshoe Bend Harold Kincaid Slick Rock Trenton Davis McIntyre Canyon Richard Dillon Slick Rock Caryon Richard Dillon Slick Rock C. M. Cooper
	Bear Creek Canyon	
Rattlesnake Claims Roger No. 1 S. K. Rim	Silver Pick	Single Jack Strawberry Roan Summit Sunny Side Tail Holt Tiny Uncle Sam Unital Adit Vanadium Queen Veta Mad-Veta Glad Wilson

### OPERATING MINES IN SUMMIT COUNTY

Alliance	Breckenridge	Robert C. Moffitt	Box 338, Breckenridge	Gold, Silver, Lead
Dig rout	Dam	Silver Bull Mining Co. Breckenridge	Breckenridge	Gold, Silver, Lead
Blue Star	Dillon		Bldg., Denver 2	Fluorspar, Uranium Vanadium
Boss	Dillon	The Boss Mining Co.	194 W. Dakota Ave., Denver	Gold, Silver, Lead,
Chataqua	Montezuma	Acme Uranium Co	404 First Nat'l Bank Bldg., Denver 2	Zinc .Gold, Silver, Lead
Colonel Sellers Green Mountain Girl	Kokomo Frisco	Colorado Plateau Uranium Co F. J. Moskal Co., Inc.	Equitable Bldg., Denver 2 3420 Van Buren St., Chicago, Illinois	Gold, Silver. Gold, Silver, Lead
Juanita Company	Montezuma	Dillon Mining Co. Maid of Orleans	Grand Junction	Manganese Gold, Silver, Lead,
Meteor Tunnel	Montezuma	Burke-Martin Mining Co.		Gold, Silver, Lead,
Minnie	Breckenridge	W. L. Davenport	Breckenridge	Gold, Silver, Lead,
National Treasure	Horseshoe Basir	Horseshoe Basin Minikus, Olson & Assoc,	Dillon	Gold, Silver, Lead,
New York	French Gulch .	French GulchKnight Mining Corp.	2432 Grove St., Denver 11	Gold, Silver, Lead,
Test Hole No. 1	Breckenridge	Arrow Drilling Co	1949 Alton St., Denver 8	Gold, Silver, Lead,
Wellington	Breckenridge .	BreckenridgeW. L. Davenport	Breckenridge	Gold, Silver, Lead,



### OPERATING QUARRIES IN JACKSON COUNTY

Steamboat Springs ....

McCoy Aggregate Co.

McCoy Aggregate Co. ..... McCoy

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Turquois Lode	Villa GroveMenless WinfieldTurq	Turquois
	OPERATING QUARRIES IN TELLER COUNTY	
Pikes Peak	Teller County Pikes Peak Granite Co. Colorado Springs Ave., Colorado Springs	Monumental Stone
	OPERATING PEAT BOGS IN BOULDER COUNTY	
Name of Bog Green Thumb	Location Operator Promote Barnes Promote Barnes Promote Barnes Peat Peat Peat Peat Peat Peat Peat Peat	Product sat
Colorado Peat, Inc Rudolph Peat Bog	OPERATING PEAT BOGS IN GILPIN COUNTY  Blackhawk Colorado Peat, Inc. Route 2, Box 79, Golden Peat Blackhawk Hawk Peat	at at
	OPERATING PEAT BOGS IN TELLER COUNTY	
Alpen Meadows Bison Peat Bog Divide Peat Bog	Lazy S Ranch Alpen Meadows, Inc. Box 1074, Colorado Springs Peat Creek M. B. Martin Colorado Springs Peat Peat Peat Peat Peat Peat Peat Peat	at at
Name of Mine North (Spicer)	OPERATING CLAY MINES AND PITS IN BOULDER COUNTY  Location Operator Pr. O. Address Pr  Rocky Flats Colorado Brick Co. Clay	Product
Helmer Open Pit Hogback No. 2 Hogback No. 3	OPERATING CLAY MINES AND PITS IN DOUGLAS COUNTY  Littleton T. L. Helmer Route 1, Box 94, Littleton Clay Waterton Robinson Brick & Tile Co. 500 Santa Fe Dr., Denver 19 Clay Waterton Robinson Brick & Tile Co. 500 Santa Fe Dr., Denver 19 Clay	ay ay ay
Hecla	OPERATING CLAY MINES AND PITS IN EL PASO COUNTY Husted Dale Hoover Clay Canon City Canon	ay

### OPERATING CLAY MINES AND PITS IN FREMONT COUNTY

Product	Clay Clay
P. O. Address	712 N. 9th St., Canon City Clay Stone City Clay
Operator	C. E. Goodale Edward Freemar
Location	Canon City
Name of Mine	Flint Nos. 1 & 2 Freeman No. 3

### OPERATING CLAY MINES AND PITS IN JEFFERSON COUNTY

Lakewood	Denver Prick & Pipe Co.  Charles E. Simpson on Robinson Brick & Tile Co.  Denver Fire Clay Co.	Hedley Clay Co. 1045 Hooker St., Denver 4 Clay Denver Brick & Pipe Co. 4501 Fox St., Denver 16 Clay Charles E. Simpson 613 17th St., Golden Clay Robinson Brick & Tile Co. 500 S. Santa Fe Dr., Denver Clay Clay Denver Fire Clay Co. 2301 Blake St. Denver 5 Clay Clay
South Strainland	Geo. W. Parfet Estate, Inc.  Geo. W. Parfet Estate, Inc.  Geo. W. Parfet State, Inc.  Golorado Brick Co.  Denver Brick & Pipe Co.	9

### OPERATING CLAY MINES AND PITS IN LAS ANIMAS COUNTY

Trinidad Brick & Tile Co. Trinidad Scott Ruiz Coal Co. Starkville

Trinidad Starkville

No Name Santa Fe

Clay

### OPERATING CLAY MINES AND PITS IN PUEBLO COUNTY

Chamblin Capers Spur Standard Fire Brick Co. Pueblo Meadow Mine No. 5 Stone City Pueblo Clay Products Co. Box 1657, Pueblo Nellie Helen Stone City Arthur L. Wands Stone City Arthur E. Wands Dueblo Stone City Stone City Pueblo Clay Products Co. Pueblo Stone City No. 1 Stone City Pueblo Clay Products Co. Pueblo Stone City No. 2 Stone City Pueblo Clay Products Co. Pueblo Stone City No. 6 Stone City Pueblo Clay Products Co. Pueblo
Chamblin Meadow Mine No Nellie Helen Rock Creek Stone City No. 1 Stone City No. 2 Stone City No. 6
Chamblin — Meadow Minn Nellie Helen Rock Creek Stone City N Stone City N Stone City N
Chambli Meadow Nellie H Rock Cr Stone Ci Stone Ci Stone Ci
Cha Mea Nell Roc Stor Stor

## OPERATING MILLS, PLANTS AND SMELTERS IN ADAMS COUNTY

Product verSand, Gravel	r 11 Sand, Gravel rer 16Sand, Gravel	UNTY	: 11 _Sand, Gravel	JNTY	Tungsten Gold	Tungsten Tungsten	Tungsten	er Silver, Lead	Fluorspar	Tungsten Tungsten	JNTY	Lime	Fluorspar	Feldspar	COUNTY	over Gold, Silver, Lead,	Gold, Silver, Lead, Zinc
P.O. Address 4200 E. Jewell Ave., Denver	6101 Lowell Blvd., Denver 11 Sand, Gravel 4800 Brighton Blvd., Denver 16Sand, Gravel	IN ARAPAHOE CO	.6101 Lowell Blvd., Denver 11 Sand, Gravel	S IN BOULDER COU	Nederland 2137 Pine St., Boulder—— Nederland	Nederland 401 Pine St., Boulder	Box 461, Boulder Box 461, Boulder	Salina Star Route, Boulder 1946. Walnut St., Boulder	Box 228, Boulder	Jamestown Box 397, Nederland	S IN CHAFFEE COL	Box 489, Salida	400 S. State St., Chicago,	Box 671, Salida	IN CLEAR CREEK	501 Kittredge Bldg., Denver 2	Georgetown
Operator C. I. Hubner Co.	Cooley Gravel Co. Brannon Sand & Gravel Co.	OPERATING MILLS, PLANTS AND SMELTERS IN ARAPAHOE COUNTY	Cooley Gravel Co.	OPERATING MILLS, PLANTS AND SMELTERS IN BOULDER COUNTY	Joe Chavez  E. J. & R. M. Ford Johnson Bros. & Prime	Joe Smith Cobb & Weldon	Wah Chang Corp. Shiprock Industries, Inc. Shiprock Industries, Inc.	White Raven Mining & Milling Co. James Pastore	General Chemical Division, Allied Chemical & Dye Corp.	Ozark-Mahoning Co. Cold Spring Tungsten, Inc.	OPERATING MILLS, PLANTS AND SMELTERS IN CHAFFEE COUNTY	.Colorado Fuel & Iron Corp	Brown's CanyonContinental Mineral Resources, Inc.	Western Feldspar Milling Co.	OPERATING MILLS, PLANTS AND SMELTERS IN CLEAR CREEK COUNTY	Lisbon Valley Uranium Co.	Greater Minerals Corp.
Location Or Denver	Denver Cool	RATING MILLS, PLA	EnglewoodCool	FRATING MILLS, P.	Boulder Creek Joe Nederland E. J		Sugar Loaf Road Wal Boulder Falls Ship Sugar Loaf Road Ship		D	Jamestown Ozar	PERATING MILLS, P	Monarch	Brown's CanyonCon	SalidaWes	RATING MILLS, PL.	Silver PlumeLisl	Georgetown
Name of Mill or Plant C. L. Hubner Co	North Plant Plant Plant Nos. 8 & 10		South Plant	OP	Chavez Chavez E. J. & R. M. Ford	Joe Smith Mill	Marion Mill Mill No. 1 (Jump)	Moore	Fastore Valmont Mill	Wano Mill Wolf Tongue Mill	_	Monarch Lime Crushing Plant	U. S. Fluorspar & Man- ganese Corp.	Western Feldspar	OPE	Burley Mill	Commonwealth (Lupton)

### Zinc Gold, Silver, Lead, Gold, Silver, Lead Gold, Silver, Lead, Gold, Silver, Lead, Gold, Silver, Lead. Zinc, Lead, Iron Sulphuric Acid Cadmium & By-Sulphuric Acid Sand, Gravel Sand, Gravel Products Preduct Lead, Zinc OPERATING MILLS, PLANTS AND SMELTERS IN CLEAR CREEK COUNTY—Cont. Feldspar Zinc Copper OPERATING MILLS, PLANTS AND SMELTERS IN DOLORES COUNTY OPERATING MILLS, PLANTS AND SMELTERS IN DENVER COUNTY OPERATING MILLS, PLANTS AND SMELTERS IN CUSTER COUNTY OPERATING MILLS, PLANTS AND SMELTERS IN DELTA COUNTY OPERATING MILLS, PLANTS AND SMELTERS IN EAGLE COUNTY 1333 W. Maple Ave., Denver 803 First Nat'l Bank Bldg., 2460 Otis St., Edgewater Box 704, Idaho Springs General Chemical Division, Allied Chemical & Dye Corp....1271 W. Bayaud Ave., Denver 23 P. O. Address Idaho Springs Idaho Springs Box 103, Delta Idaho Springs Cederidge Silver Cliff Denver Gilman Rico Rico Rico Argentine Mining Co. ...... American Smelting & Refining Idaho Springs ..... Alpha Mining & Milling Co. Freeland Gulch ... Lucky Seven Mining Corp. Front Range Mines, Inc. જ Delta Sand & Gravel Co. W. A. Hamilton International Minerals Sarstark Mining Co. Chemical Corp. LeRoy Giles & Co. Empire Zinc Co. Silver Cliff ..... H. L. Turner Operator daho Springs Trail Creek Location Globeville Dumont Denver Denver Gilman Delta Sand & Gravel Co. ... Delta Hamilton Crushing Plant .. Delta Argentine Mill Rico Rico Sulphuric Acid Plant Rico Name of Mill or Plant Feldspar Dixie Mill Front Range Mill Silver Spruce Mill Lucky Seven Mill Trail Creek Mill Denver Works Consolidated Globe Plant Turner Mill Eagle Mill

# OPERATING MILLS, PLANTS AND SMELTERS IN FREMONT COUNTY

New Jersey Zinc         Canon City         Zinc           Ideal Cement Co.         Box 231, Florence         Cement           Ideal Cement Co.         Box 231, Florence         Plaster           Wellpoz, Inc.         Springs         Oil Well Cement	OPERATING MILLS, PLANTS AND SMELTERS IN GARFIELD COUNTY	Basic Chemical Co. Glenwood Springs Lime Union Carbide Nuclear Co. Rifle Grand Valley Plant Construction and Stearns-Roger Mfg. Co. Grand Dannock St., Denver 4 — Plant Construction	OPERATING MILLS, PLANTS AND SMELTERS IN GILPIN COUNTY	Cherokee Uranium Mining Corp609 Equitable Bldg., Denver			Million Co. Box 571 Loveland G	lty	OPERATING MILLS, PLANTS AND SMELTERS IN GUNNISON COUNTY	Basic Chemical Corp. Box 270, Glenwood Springs Crushed Marble American Smelting & Refining	600 Crandell Bldg., Salt Lake City, Utah	Zinc, Copper
Canon City Mill —— Canon City —— New Jersey Zinc Portland Cement Plant —— Canon City —— Ideal Cement Co. Portland Plaster Mill —— Portland —— Ideal Cement Co. Pozzlan —— Howard —— Wellpoz, Inc. ——	OPERATING MILLS, PL	Basic Chemical Co. Glenwood Springs Basic Rifle Plant Rifle Union Oil Shale Plant Grand Valley Stea		Boodle MillCentral CityUnit Cherokee	Federal MillRussell GulchCorp	Glory Hole Crushing Nevadaville Glory Hole, Inc. Plant	11 Central City	Golden Gilpin	OPERATING MILLS, PLA	Basic Chemical MillMarbleBasi Keystone Unit PlantCrested ButteAme		

# OPERATING MILLS, PLANTS AND SMELTERS IN JACKSON COUNTY

Name of Mill or Plant NorthgateOPER_	Location Cowdrey ATING MILLS	Operator Ozark-Mahoning Co. PLANTS AND SMELTE	OPERATING MILLS, PLANTS AND SMELTERS IN JEFFERSON COUNTY	_Fluorspar IY
Beryl Ores Co. Bramley Construction, Inc. Brannon Sand & Gravel Co. (Pit No. 11) C. L. Hubner & Co. Rio Grande Gravel Co.	Arvada Morrison Wheatridge Wheatridge	Brannon Sand & Gravel Co.  C. L. Hubner & Co.  Rio Grande Gravel Co.	Box 105, Route 1, Arvada Beryl  2300 W. Oxford St., Littleton Sand, Gravel 4800 Brighton Blvd., Denver 16 4200 E. Jewell St., Denver 20, Sand, Gravel 1123 Santa Fe Drive, Denver 19	Band, Gravel Sand, Gravel Sand, Gravel Sand, Gravel
OF	ERATING MI	LLS, PLANTS AND SMEI	OPERATING MILLS, PLANTS AND SMELTERS IN LAKE COUNTY	
Arkansas Valley PlantLeadville Climax Mill	Leadville	American Smelting & Refining Co	Leadville	Gold, Silver, Lead, Copper Molybdenum, Tung sten, Tin
Climax Sand & Gravel Plant Cloud City Mill Lincoln Mill Resurrection Mill T & K Mills	Climax —Leadville —Big Evans Gulc —California Gulcl	Climax C. Ryan & Son Leadville Adolph Sadar Big Evans Gulch Lincoln Mine & Milling Co. California Gulch Resurrection Mining Co. California Gulch Louis Kostelic	Climax 7th St., Leadville 106 Harrison Ave., Leadville Leadville 203 W. 3rd, Leadville 2	Sand, Gravel Gold Silver, Lead Gold, Silver, Lead, Zinc, Copper Zinc, Capper
OPEI	RATING MILL	S, PLANTS AND SMELTI	OPERATING MILLS, PLANTS AND SMELTERS IN LA PLATA COUNTY	ΓΥ
Vanadium Corp. of America (Durango jea (Durango Plant) Durango Zodomok Mill		Vanadium Corp. of America Canyon Zodomok Mines, Inc.	Durango Box 452, Durango	Uranium, Vanadiur Gold, Silver
OPE	RATING MILI	LS, PLANTS AND SMELT	OPERATING MILLS, PLANTS AND SMELTERS IN LARIMER COUNTY	Y.
Boettcher Plant Sterling Sand & Gravel Co.	LaPorte Fort Collins	Ideal Cement Co	Box 579, Fort Collins	Cement Sand, Gravel

## OPERATING MILLS, PLANTS AND SMELTERS IN MESA COUNTY

Uranium Develop- ment Uranium, Vanadium	NTY Lead, Zinc	OUNTY Dry Ice Sand, Gravel	NTY	Uranium, Vanadium Uranium, Vanadium	VTY	Gold, Silver, Lead, Zinc, Copper	Gold, Silver, Lead, Zinc, Gold, Silver, Lead, Zinc, Copper	Gold, Silver, Lead, Zinc, Copper	NTY	Mica
Grand Junction	S IN MINERAL COU	IN MONTEZUMA CO	IN MONTROSE COU	Uravan Naturita	RS IN OURAY COUR	Ouray	Ouray	Ouray	RS IN PUEBLO COUI	Pueblo
Grand Junction United States Atomic Energy Commission	OPERATING MILLS, PLANTS AND SMELTERS IN MINERAL COUNTY	OPERATING MILLS, PLANTS AND SMELTERS IN MONTEZUMA COUNTY ss ——McElmo Canyon—Colorado Carbonics, Inc. ————Bolores ————————————————————————————————————	OPERATING MILLS, PLANTS AND SMELTERS IN MONTROSE COUNTY	Union Carbide Nuclear Co	OPERATING MILLS, PLANTS AND SMELTERS IN OURAY COUNTY	King Lease, Inc.	Roland Jahnke	Idarado Mining Co.	OPERATING MILLS, PLANTS AND SMELTERS IN PUEBLO COUNTY	International Minerals & Chemical Co.
1 1	OPERATING MILLS,	PERATING MILLS, PI	ERATING MILLS, PI	Uravan	OPERATING MILLS,	OurayK	OurayR.	Red MountainId	OPERATING MILLS,	Pueblo
Atomic Energy Commission Sion Climax Mill	C Emperius Mill	OP Colorado Carbonics Neilsons, Inc	OP	Union Carbide Nuclear Co. Uravan Plant Vanadium Corp. of Amer ica Naturita Plant		Camp Bird	Rolling J Mining & Milling Milling Milling Silver Shield	Treasury Mill		Mica Grinding Plant

# OPERATING MILLS, PLANTS AND SMELTERS IN SAGUACHE COUNTY

P. O. Address  Bonanza Route, Villa Grove Under Construction	OUNTY Gold, Silver, Lead Zinc Gold, Silver, Lead Zinc	COUNTY Gold, Silver, Lead Zinc Gold, Silver, Lead Copper, Zinc	JUNTY 31dg., Gold, Silver, Lead Silver, Lead, Zinc	UNTY Gold	JNTY Sand, Gravel	Product nver 12 Gold ulder Gold
P. O. Address Bonanza Route, Villa	FERS IN SAN JUAN C Silverton Silverton	ERS IN SAN MIGUEL  Box 402, Telluride  Telluride	TEES IN SUMMIT COUN  404 First Nat'l Bank Bldg., Denver 2 Montezuma Breckenridge	TERS IN TELLER CC	ILTERS IN WELD CO	R CREEK COUNTY P. O. Address Pr. 4319 W. 46th Ave., Denver 12 Gold
Operator D. W. Schmidt	OPERATING MILLS, PLANTS AND SMELTERS IN SAN JUAN COUNTY	OPERATING MILLS, PLANTS AND SMELTERS IN SAN MIGUEL COUNTY  Column Column A. Delbert McCluskey Box 402, Telluride Column C	OPERATING MILLS, PLANTS AND SMELTERS IN SUMMIT COUNTY  Montezuma — Acme Uranium Co. — 404 First Nat'l Bank Bldg.,  Montezuma — Burke-Martin Co. — Montezuma — Steckenridge — — — — — — — — — — — — — — — — — — —	OPERATING MILLS, PLANTS AND SMELTERS IN TELLER COUNTY	OPERATING MILLS, PLANTS AND SMELTERS IN WELD COUNTY yGreeley	OPERATING PLACERS IN CLEAR CREEK COUNTY  Cation  Operator  Creek  Creek  Osprings  Coperator  Operator  Op
ant Location Bonanza	OPERATING MILLS	PERATING MILLS,	;	OPERATING MILI	OPERATING MII	OPERATII Location Mill Creek Idaho Springs
Name of Mill or Plant Schmidt Mill	Lead Carbonate Mill	OL Butterfly	Acme Uranium Mill Burke-Martin Mill Moskal Mill	Carlton Mill	OPERATII	Name of Placer Conqueror Franks Placer

COUNTY
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Durand Brothers	Gilpin Black Hawk Durand Brothers Black Hawk Golds C. Spitz 329 Pearl St., Denver 3 Tourist-Gold	
Bird Page Placer	OPERATING PLACERS IN LAKE COUNTY  Leadville G. R. McDaniel Box 363, Rifle Gold	
Alma	OPERATING PLACERS IN PARK COUNTY  Alma Mazzocco Construction Co. Box 96, Alma Gold	
	OPERATING PLACERS IN SUMMIT COUNTY	
Galena	N. E. Brecken- ridgeC. & H. Leasing Co1124 10th St., Denver 4Gold	
	ROAD WORK, TUNNELS AND DAMS—1956	
Name of Operation Jones Pass Tunnel Jones Pass Vasquez Tunnel (Surface) Jones Pass Vasquez Tunnel (Surface) Jones Pass	Location Operator P. O. Address Project Jones Pass Michigan Sewer Constructors Box 217, Empire Water Tunnel Jones Pass Sharpe Construction Co. Trinidad Water Tunnel Lones Pass Michigan Sewer Constructors Box 217, Empire Water Tunnel Lones Pass Michigan Sewer Constructors Box 217, Empire Water Tunnel	
Highway	DELTA COUNTY Pioneer Construction Co. 21050 Oakland St., Pueblo Highway	
Culvert Moffat Water Tunnel	GILPIN COUNTY  Box 8757, University Park  C. L. Hubner Co	
Highway	GUNNISON COUNTY McMillon Construction Co	

### ROAD WORK, TUNNELS AND DAMS—1956—Cont. LAKE COUNTY

	Project Utah Water Tunnel ado Springs Water Tunnel	ourango Road Highway	ood Springs – Highway		Tunnel St., Engle-Highway Highway	nsas Highway	Water Tunnel Dam	outh, Engle-
LAKE COUNTY	Operator  Boyle Bros. Drilling Co. Salt Lake City, Utah Mazzocco Construction Co. Box 1298, Colorado Springs	LA PLATA COUNTY Fairway Construction Co. 726 5th Ave., Durango E. J. Rippy & Sons	MESA COUNTY Gardner Construction Co. Box 360, Glenwood Springs	MONTEZUMA COUNTY	A. S. Horner Construction Co Cortez McMillon Construction Co 3050 S. Huron St., Engle- E. J. Rippy & SonsNew Castle	MONTROSE COUNTY San Ore Construction Co. McPherson, Kansas	PARK COUNTY Blue River Constructors Dillon Fisher Contracting Co.	SAN JUAN COUNTY  Lowdermilk Construction Co1950 W. Dartmouth, Engle-
	Name of Operation Location  Carlton Tunnel Leadville  Homestake Tunnel Turquois Lake	Road Highway	Highway		Tunnel Mesa Verde Highway Nat'l Park Highway	Highway	Harold D. Roberts Tunnel Grant Montgomery Dam — Montgomery Gulch	Road Paradox

### SAN MIGUEL COUNTY

Crushing Mill	Mill Slick Rock	Harrison & Atchison 1566 S. Bannock St., Denver 19	Construction
Harold D. Roberts Tunnel	Roberts Dillon	SUMMIT COUNTY Blue River Constructors Dillon	Water Tunnel
Highway		YUMA COUNTY C. L. Hubner Co. Denver 16	Highway 51
	CORE 4	CORE AND WAGON DRILLING OPERATIONS	
	Brasier Brothers Construction Co.	Co. Norwood	Colorado Plateau
	Cannon Diamond Drilling Co.	Box 712, Grand Junction	Colorado Plateau
	Franklin & Cowan	Box 546, Ozona, Texas	Colorado Plateau
	Johnson & Youvan	Naturita	Colorado Plateau
	Joy Manufacturing Co.	Box 956, Cortez	Colorado Plateau
	Kostyk Drilling Co.	Grand Junction	Colorado Plateau
	Lippoth & Wein	Box 502, Grand Junction	Colorado Plateau
	McPherson Drilling Co.	Box 185, Naturita	Colorado Plateau
	Minerals Engineering Co.	801 4th Ave., Grand Junction	Colorado Plateau
	Mott & Sons, Inc.	Box 830, 8th Ave., Huntington, West Virginia	Colorado Plateau
	Sprague & Henwood	Box 645, Grand Junction	Colorado Plateau
	U.M.U.C. Mining Co.	Uravan Route, Whitewater	Colorado Plateau
	Western Machinery Co	Grand Innetion	Colorado Platean





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